

Exhibit “B”

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2019

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission File Number 0-24000

ERIE INDEMNITY COMPANY

(Exact name of registrant as specified in its charter)

Pennsylvania

25-0466020

(State or other jurisdiction of
incorporation or organization)

(IRS Employer
Identification No.)

100 Erie Insurance Place, Erie, Pennsylvania

16530

(Address of principal executive offices)

(Zip Code)

814 870-2000

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Class A common stock, stated value \$0.0292 per share

ERIE

NASDAQ Stock Market, LLC

(Title of each class)

(Trading Symbol)

(Name of each exchange on which registered)

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

☒

Accelerated filer

☐

Non-accelerated filer

☐

Smaller reporting company

☐

Emerging growth company

☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

Aggregate market value of voting and non-voting common stock held by non-affiliates as of the last business day of the registrant's most recently completed second fiscal quarter: \$6.3 billion of Class A non-voting common stock as of June 30, 2019. There is no active market for the Class B voting common stock. The Class B common stock is closely held by few shareholders.

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date:
46,189,068 shares of Class A common stock and 2,542 shares of Class B common stock outstanding on February 21, 2020.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of Part III of this Form 10-K (Items 10, 11, 12, 13, and 14) are incorporated by reference to the information statement on Schedule 14C to be filed with the Securities and Exchange Commission no later than 120 days after December 31, 2019.

INDEX

<u>PART</u>	<u>ITEM NUMBER AND CAPTION</u>	<u>PAGE</u>
<u>I</u>	<u>Item 1. Business</u>	<u>3</u>
	<u>Item 1A. Risk Factors</u>	<u>5</u>
	<u>Item 1B. Unresolved Staff Comments</u>	<u>11</u>
	<u>Item 2. Properties</u>	<u>12</u>
	<u>Item 3. Legal Proceedings</u>	<u>13</u>
	<u>Item 4. Mine Safety Disclosures</u>	<u>15</u>
<u>II</u>	<u>Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities</u>	<u>16</u>
	<u>Item 6. Selected Financial Data</u>	<u>17</u>
	<u>Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	<u>18</u>
	<u>Item 7A. Quantitative and Qualitative Disclosures About Market Risk</u>	<u>39</u>
	<u>Item 8. Financial Statements and Supplementary Data</u>	<u>42</u>
	<u>Item 9. Changes In and Disagreements With Accountants on Accounting and Financial Disclosure</u>	<u>81</u>
	<u>Item 9A. Controls and Procedures</u>	<u>81</u>
	<u>Item 9B. Other Information</u>	<u>81</u>
<u>III</u>	<u>Item 10. Directors, Executive Officers and Corporate Governance</u>	<u>83</u>
	<u>Item 11. Executive Compensation</u>	<u>84</u>
	<u>Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u>	<u>84</u>
	<u>Item 13. Certain Relationships and Related Transactions, and Director Independence</u>	<u>84</u>
	<u>Item 14. Principal Accountant Fees and Services</u>	<u>84</u>
<u>IV</u>	<u>Item 15. Exhibits and Financial Statement Schedules</u>	<u>85</u>
	<u>Item 16. Form 10-K Summary</u>	<u>85</u>
	<u>Signatures</u>	<u>90</u>

PART I**ITEM 1. BUSINESS****General**

Erie Indemnity Company ("Indemnity", "we", "us", "our") is a publicly held Pennsylvania business corporation that has since its incorporation in 1925 served as the attorney-in-fact for the subscribers (policyholders) at the Erie Insurance Exchange ("Exchange"). The Exchange, which also commenced business in 1925, is a Pennsylvania-domiciled reciprocal insurer that writes property and casualty insurance. The Exchange has wholly owned property and casualty subsidiaries including: Erie Insurance Company, Erie Insurance Company of New York, Erie Insurance Property & Casualty Company and Flagship City Insurance Company, and a wholly owned life insurance company, Erie Family Life Insurance Company ("EFL").

Our primary function as attorney-in-fact is to perform policy issuance and renewal services on behalf of the subscribers at the Exchange. We also act as attorney-in-fact on behalf of the Exchange with respect to all claims handling and investment management services, as well as the service provider for all claims handling, life insurance, and investment management services for its insurance subsidiaries, collectively referred to as "administrative services". Acting as attorney-in-fact in these two capacities is done in accordance with a subscriber's agreement (a limited power of attorney) executed individually by each subscriber (policyholder), which appoints us as their common attorney-in-fact to transact certain business on their behalf. Pursuant to the subscriber's agreement for acting as attorney-in-fact in these two capacities, we earn a management fee calculated as a percentage, not to exceed 25%, of the direct and affiliated assumed premiums written by the Exchange. The management fee rate is set at least annually by our Board of Directors. The process of setting the management fee rate includes the evaluation of current year operating results compared to both prior year and industry estimated results for both Indemnity and the Exchange, and consideration of several factors for both entities including: their relative financial strength and capital position; projected revenue, expense and earnings for the subsequent year; future capital needs; as well as competitive position.

Services

The policy issuance and renewal services we provide to the Exchange are related to the sales, underwriting and issuance of policies. The sales related services we provide include agent compensation and certain sales and advertising support services. Agent compensation includes scheduled commissions to agents based upon premiums written as well as additional commissions and bonuses to agents, which are earned by achieving targeted measures. Agent compensation comprised approximately 67% of our 2019 policy issuance and renewal expenses. The underwriting services we provide include underwriting and policy processing and comprised approximately 10% of our 2019 policy issuance and renewal expenses. The remaining services we provide include customer service and administrative support. We also provide information technology services that support all the functions listed above that comprised approximately 11% of our 2019 policy issuance and renewal expenses. Included in these expenses are allocations of costs for departments that support these policy issuance and renewal functions.

By virtue of its legal structure as a reciprocal insurer, the Exchange does not have any employees or officers. Therefore, it enters into contractual relationships by and through an attorney-in-fact. Indemnity serves as the attorney-in-fact on behalf of the Exchange with respect to its administrative services. The Exchange's insurance subsidiaries also utilize Indemnity for these services in accordance with the service agreements between each of the subsidiaries and Indemnity. Claims handling services include costs incurred in the claims process, including the adjustment, investigation, defense, recording and payment functions. Life insurance management services include costs incurred in the management and processing of life insurance business. Investment management services are related to investment trading activity, accounting and all other functions attributable to the investment of funds. Included in these expenses are allocations of costs for departments that support these administrative functions. The amounts incurred for these services are reimbursed to Indemnity at cost in accordance with the subscriber's agreement and the service agreements. State insurance regulations require that intercompany service agreements and any material amendments be approved in advance by the state insurance department.

Erie Insurance Exchange

As our primary purpose is to manage the affairs at the Exchange for the benefit of the subscribers (policyholders) through the policy issuance and renewal services and administrative services, the Exchange is our sole customer. Our earnings are largely generated from management fees based on the direct and affiliated assumed premiums written by the Exchange. We have no direct competition in providing these services to the Exchange.

The Exchange generates revenue by insuring preferred and standard risks, with personal lines comprising 71% of the 2019 direct and affiliated assumed written premiums and commercial lines comprising the remaining 29%. The principal personal lines products are private passenger automobile and homeowners. The principal commercial lines products are commercial multi-peril, commercial automobile and workers compensation. Historically, due to policy renewal and sales patterns, the

Exchange's direct and affiliated assumed written premiums are greater in the second and third quarters than in the first and fourth quarters of the calendar year.

The Exchange is represented by independent agencies that serve as its sole distribution channel. In addition to their principal role as salespersons, the independent agents play a significant role as underwriting and service providers and are an integral part of the Exchange's success.

Our results of operations are tied to the growth and financial condition of the Exchange. If any events occurred that impaired the Exchange's ability to grow or sustain its financial condition, including but not limited to reduced financial strength ratings, disruption in the independent agency relationships, significant catastrophe losses, or products not meeting customer demands, the Exchange could find it more difficult to retain its existing business and attract new business. A decline in the business of the Exchange almost certainly would have as a consequence a decline in the total premiums paid and a correspondingly adverse effect on the amount of the management fees we receive. We also have an exposure to a concentration of credit risk related to the unsecured receivables due from the Exchange for its management fee and cost reimbursements. See Part II, Item 8. "Financial Statements and Supplementary Data - Note 16, Concentrations of Credit Risk, of Notes to Financial Statements" contained within this report. See the risk factors related to our dependency on the growth and financial condition of the Exchange in Item 1A. "Risk Factors" contained within this report.

Competition

Our primary function as attorney-in-fact is to perform policy issuance and renewal services on behalf of the subscribers at the Exchange. We also act as attorney-in-fact on behalf of the Exchange, as well as the service provider for its insurance subsidiaries, with respect to all administrative services. There are a limited number of companies that provide services under a reciprocal insurance exchange structure. We do not directly compete against other such companies, given we are appointed by the subscribers at the Exchange to provide these services.

The direct and affiliated assumed premiums written by the Exchange drive our management fee which is our primary source of revenue. The property and casualty insurance industry is highly competitive. Property and casualty insurers generally compete on the basis of customer service, price, consumer recognition, coverages offered, claims handling, financial stability and geographic coverage. Vigorous competition, particularly in the personal lines automobile and homeowners lines of business, is provided by large, well-capitalized national companies, some of which have broad distribution networks of employed or captive agents, by smaller regional insurers, and by large companies who market and sell personal lines products directly to consumers. Innovations by competitors or other market participants may also increase the level of competition in the industry. In addition, because the insurance products of the Exchange are marketed exclusively through independent insurance agents, the Exchange faces competition within its appointed agencies based upon ease of doing business, product, price, and service relationships.

Market competition bears directly on the price charged for insurance products and services subject to regulatory limitations. Industry capital levels can also significantly affect prices charged for coverage. Growth is driven by a company's ability to provide insurance services and competitive prices while maintaining target profit margins. Growth is a product of a company's ability to retain existing customers and to attract new customers, as well as movement in the average premium per policy.

The Exchange's strategic focus includes employing an underwriting philosophy and product mix targeted to produce an underwriting profit on a long-term basis through careful risk selection and rational pricing, and consistently providing superior service to policyholders and agents. The Exchange's business model is designed to provide the advantages of localized marketing and claims servicing with the economies of scale and low cost of operations from centralized support services. The Exchange also carefully selects the independent agencies that represent it and seeks to be the lead insurer with its agents in order to enhance the agency relationship and the likelihood of receiving the most desirable underwriting opportunities from its agents.

See the risk factors related to our dependency on the growth and financial condition of the Exchange in Item 1A. "Risk Factors" contained within this report for further discussion on competition in the insurance industry.

Employees

We had over 5,700 full-time employees at December 31, 2019, of which over 2,800, or 49%, provide claims related services exclusively for the Exchange. The Exchange reimburses us monthly for the cost of these services.

Government Regulation

Most states have enacted legislation that regulates insurance holding company systems, defined as two or more affiliated persons, one or more of which is an insurer. Indemnity and the Exchange, and its wholly owned subsidiaries, meet the definition of an insurance holding company system.

Each insurance company in the holding company system is required to register with the insurance supervisory authority of its state of domicile and furnish information regarding the operations of companies within the holding company system that may materially affect the operations, management, or financial condition of the insurers within the system. Pursuant to these laws, the respective insurance departments may examine us and the Exchange and its wholly owned subsidiaries at any time, and may require disclosure and/or prior approval of certain transactions with the insurers and us, as an insurance holding company.

All transactions within a holding company system affecting the member insurers of the holding company system must be fair and reasonable and any charges or fees for services performed must be reasonable. Approval by the applicable insurance commissioner is required prior to the consummation of transactions affecting the members within a holding company system.

Website Access

Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports are available free of charge on our website at www.erieinsurance.com as soon as reasonably practicable after such material is filed electronically with the Securities and Exchange Commission. Additionally, copies of our annual report on Form 10-K are available free of charge, upon written request, by contacting Investor Relations, Erie Indemnity Company, 100 Erie Insurance Place, Erie, PA 16530, or calling (800) 458-0811.

ITEM 1A. RISK FACTORS

Our business involves various risks and uncertainties, including, but not limited to those discussed in this section. The risks and uncertainties described in the risk factors below, or any additional risk outside of those discussed below, could have a material adverse effect on our business, financial condition, operating results, cash flows, or liquidity if they were to develop into actual events. This information should be considered carefully together with the other information contained in this report and in other reports and materials we file periodically with the Securities and Exchange Commission.

If the management fee rate paid by the Exchange is reduced or if there is a significant decrease in the amount of direct and affiliated assumed premiums written by the Exchange, revenues and profitability could be materially adversely affected.

We are dependent upon management fees paid by the Exchange, which represent our principal source of revenue. Pursuant to the subscriber's agreement with the subscribers at the Exchange, we may retain up to 25% of all direct and affiliated assumed premiums written by the Exchange. Therefore, management fee revenue from the Exchange is calculated by multiplying the management fee rate by the direct and affiliated assumed premiums written by the Exchange. Accordingly, any reduction in direct and affiliated assumed premiums written by the Exchange and/or the management fee rate would have a negative effect on our revenues and net income.

The management fee rate is determined by our Board of Directors and may not exceed 25% of the direct and affiliated assumed premiums written by the Exchange. The Board of Directors sets the management fee rate each December for the following year. At their discretion, the rate can be changed at any time. The process of setting the management fee rate includes the evaluation of current year operating results compared to both prior year and industry estimated results for both Indemnity and the Exchange, and consideration of several factors for both entities including: their relative financial strength and capital position; projected revenue, expense and earnings for the subsequent year; future capital needs; as well as competitive position. The evaluation of these factors could result in a reduction to the management fee rate and our revenues and profitability could be materially adversely affected.

Serving as the attorney-in-fact in the reciprocal insurance exchange structure results in the Exchange being our sole customer. We have an interest in the growth of the Exchange as our earnings are largely generated from management fees based on the direct and affiliated assumed premiums written by the Exchange. If the Exchange's ability to grow or renew policies were adversely impacted, the premium revenue of the Exchange would be adversely affected which would reduce our management fee revenue. The circumstances or events that might impair the Exchange's ability to grow include, but are not limited to, the items discussed below.

Unfavorable changes in macroeconomic conditions, including declining consumer confidence, inflation, high unemployment, and the threat of recession, among others, may lead the Exchange's customers to modify coverage, not renew policies, or even cancel policies, which could adversely affect the premium revenue of the Exchange, and consequently our management fee.

The Exchange faces significant competition from other regional and national insurance companies. The property and casualty insurance industry is highly competitive on the basis of product, price and service. If the Exchange's competitors offer property and casualty products with more coverage or offer lower rates, and the Exchange is unable to implement product improvements quickly enough to keep pace, its ability to grow and renew its business may be adversely impacted. In addition, due to the Exchange's premium concentration in the automobile and homeowners insurance markets, it may be more sensitive to trends that could affect auto and home insurance coverages and rates over time, for example changing vehicle usage, usage-based methods of determining premiums, ownership and driving patterns such as ride sharing, advancements in vehicle or home technology or safety features such as accident and loss prevention technologies, the development of autonomous vehicles, or residential occupancy patterns, among other factors. In addition, innovations by competitors or other market participants may increase the level of competition in the industry. If we fail to respond to those innovations on a timely basis, our competitive position and results may be materially adversely affected.

The Exchange markets and sells its insurance products through independent, non-exclusive insurance agencies. These agencies are not obligated to sell only the Exchange's insurance products, and generally also sell products of the Exchange's competitors. If agencies do not maintain their current levels of marketing efforts, bind the Exchange to unacceptable risks, place business with competing insurers, or the Exchange is unsuccessful in attracting or retaining agencies in its distribution system as well as maintaining its relationships with those agencies, the Exchange's ability to grow and renew its business may be adversely impacted. Additionally, consumer preferences may cause the insurance industry as a whole to migrate to a delivery system other than independent agencies.

The Exchange maintains a brand recognized for customer service. The perceived performance, actions, conduct and behaviors of employees, independent insurance agency representatives, and third-party service partners may result in reputational harm to the Exchange's brand. Specific incidents which may cause harm include but are not limited to disputes, long customer wait times, errors in processing a claim, failure to protect sensitive customer data, and negative or inaccurate social media communications. Likewise, an inability to match or exceed the service provided by competitors, which is increasingly relying on digital delivery and enhanced distribution technology, may impede the Exchange's ability to maintain and/or grow its customer base. If third-party service providers fail to perform as anticipated, the Exchange may experience operational difficulties, increased costs and reputational damage. If an extreme catastrophic event were to occur in a heavily concentrated geographic area of subscribers/policyholders, an extraordinarily high number of claims could have the potential to strain claims processing and affect the Exchange's ability to satisfy its customers. Any reputational harm to the Exchange could have the potential to impair its ability to grow and renew its business.

We also have an interest in the financial condition of the Exchange based on serving as the attorney-in-fact in the reciprocal insurance exchange structure and the Exchange being our sole customer. Our earnings are largely generated from management fees based on the direct and affiliated assumed premiums written by the Exchange. If the Exchange were to fail to maintain acceptable financial strength ratings, its competitive position in the insurance industry would be adversely affected. If a rating downgrade led to customers not renewing or canceling policies, or impacted the Exchange's ability to attract new customers, the premium revenue of the Exchange would be adversely affected which would reduce our management fee revenue. The circumstances or events that might impair the Exchange's financial condition include, but are not limited to, the items discussed below.

Financial strength ratings are an important factor in establishing the competitive position of insurance companies such as the Exchange. Higher ratings generally indicate greater financial stability and a stronger ability to meet ongoing obligations to policyholders. The Exchange's A.M. Best rating is currently A+ ("Superior"). Rating agencies periodically review insurers' ratings and change their rating criteria; therefore, the Exchange's current rating may not be maintained in the future. A significant downgrade in this or other ratings would reduce the competitive position of the Exchange, making it more difficult to attract profitable business in the highly competitive property and casualty insurance market and potentially result in reduced sales of its products and lower premium revenue.

The performance of the Exchange's investment portfolio is subject to a variety of investment risks. The Exchange's investment portfolio is comprised principally of fixed income securities, equity securities and limited partnerships. The fixed income portfolio is subject to a number of risks including, but not limited to, interest rate risk, investment credit risk, sector/concentration risk and liquidity risk. The Exchange's common stock and preferred equity securities have exposure to price risk, the risk of potential loss in estimated fair value resulting from an adverse change in prices. Limited partnerships are significantly less liquid and generally involve higher degrees of price risk than publicly traded securities. Limited partnerships, like publicly traded securities, have exposure to market volatility; but unlike fixed income securities, cash flows and return expectations are less predictable. If any investments in the Exchange's investment portfolio were to suffer a substantial decrease in value, the Exchange's financial position could be materially adversely affected through increased unrealized losses or impairments. A significant decrease in the Exchange's portfolio could also put it, or its subsidiaries, at risk of failing to satisfy regulatory or rating agency minimum capital requirements.

Property and casualty insurers are subject to extensive regulatory supervision in the states in which they do business. This regulatory oversight includes, by way of example, matters relating to licensing, examination, rate setting, market conduct, policy forms, limitations on the nature and amount of certain investments, claims practices, mandated participation in involuntary markets and guaranty funds, reserve adequacy, insurer solvency, restrictions on underwriting standards, accounting standards, and transactions between affiliates. Such regulation and supervision are primarily for the benefit and protection of policyholders. Changes in applicable insurance laws, regulations, or changes in the way regulators administer those laws or regulations could adversely change the Exchange's operating environment and increase its exposure to loss or put it at a competitive disadvantage, which could result in reduced sales of its products and lower premium revenue.

As insurance industry practices and legal, judicial, social and other environmental conditions change, unexpected and unintended issues related to claims and coverage may emerge. In some instances, these emerging issues may not become apparent for some time after the Exchange has issued the affected insurance policies. As a result, the full extent of liability under the Exchange's insurance policies may not be known for many years after the policies are issued. These issues may adversely affect the Exchange's business by either extending coverage beyond its underwriting intent or by increasing the number or size of claims.

The Exchange's insurance operations are exposed to claims arising out of catastrophes. Common natural catastrophic events include hurricanes, earthquakes, tornadoes, hail storms, and severe winter weather. The frequency and severity of these catastrophes is inherently unpredictable. Changing climate conditions have added to the unpredictability, frequency and severity of natural disasters and have created additional uncertainty as to future trends and exposures. A single catastrophic occurrence or aggregation of multiple smaller occurrences within its geographical region could adversely affect the financial condition of the Exchange. Terrorist attacks could also cause losses from insurance claims related to the property and casualty insurance operations. The Exchange could incur large net losses if terrorist attacks were to occur which could adversely affect its financial condition.

If the costs of providing services to the Exchange are not controlled, our profitability could be materially adversely affected.

Pursuant to the subscriber's agreement, we perform policy issuance and renewal services for the subscribers at the Exchange and we serve as the attorney-in-fact on behalf of the Exchange with respect to its administrative services. The most significant costs we incur in providing policy issuance and renewal services are commissions, employee costs, and technology costs.

Commissions to independent agents are our largest expense. Commissions include scheduled commissions to agents based upon premiums written as well as additional commissions and bonuses to agents, which are earned by achieving certain targeted measures. Changes to commission rates or bonus programs may result in increased future costs and lower profitability.

Our second largest expense is employee costs, including salaries, healthcare, pension, and other benefit costs. Regulatory developments, provider relationships, and demographic and economic factors that are beyond our control indicate that employee healthcare costs could continue to increase which could reduce our profitability. The defined benefit pension plan we offer to our employees is affected by variable factors such as the interest rate used to discount pension liabilities, asset performance and changes in retirement patterns, which are beyond our control and any related future costs increases would reduce our profitability.

Technological development is necessary to facilitate ease of doing business for employees, agents and customers. Insurance company technological developments are focused on simplifying and improving the customer experience, increasing efficiencies, redesigning products and addressing other potentially disruptive changes in the insurance industry. As we continue to develop technology initiatives in order to remain competitive, our profitability could be negatively impacted as we invest in system development.

If we are unable to attract, develop, and retain talented executives, key managers, and employees our financial conditions and results of operations could be adversely affected.

Our success is largely dependent upon our ability to attract and retain talented executives and other key management. Talent is defined as people with the right skills, knowledge, abilities, character, and motivation. The loss of the services and leadership of certain key officers and the failure to attract and develop talented new executives and managers could prevent us from successfully communicating, implementing, and executing business strategies.

Our success also depends on our ability to attract, develop, and retain a talented employee base. The inability to staff all functions of our business with employees possessing the appropriate talent, or our failure to recognize and respond to changing trends and other circumstances that affect our employees, could have an adverse effect on our business performance. Staffing appropriately talented employees for the handling of claims and servicing of customers, rendering of disciplined underwriting, and effective sales and marketing are critical to the core functions of our business. In addition, talented employees in the actuarial, finance, human resources, law, and information technology areas are also essential to support our core functions.

If we are unable to ensure system availability or effectively manage technology initiatives, we may experience adverse financial consequences and/or may be unable to compete effectively.

Our business is highly dependent upon the effectiveness of our technology and information systems which support key functions of our core business operations including processing applications and premium payments, providing customer support, performing actuarial and financial analysis, and maintaining key data. Additionally, the Exchange relies heavily on technology systems for processing claims. In order to support our business processes and strategic initiatives in a cost and resource efficient manner, we must maintain the effectiveness of existing technology systems and continue to both develop new, and enhance existing, technology systems. As we invest in the development of our systems, costs and completion times could exceed original estimates, and/or the project may not deliver the anticipated benefit, or perform as expected. If we do not effectively and efficiently manage and upgrade our technology systems, our ability to serve our customers and implement our strategic initiatives could be adversely impacted.

Additionally, we depend on a large amount of data to price policies appropriately, track exposures, perform financial analysis, report to regulatory bodies, and ultimately make business decisions. Should this data be inaccurate or insufficient, risk exposure may be underestimated and/or poor business decisions may be made. This may in turn lead to adverse operational or financial performance and adverse customer or investor confidence.

If we experience difficulties with technology, data and network security, including as a result of cyber attacks, third-party relationships or cloud-based relationships, our ability to conduct our business could be adversely impacted.

In the normal course of business, we collect, use, store and where appropriate, disclose data concerning individuals and businesses. We also conduct business using third-party vendors who may provide software, data storage, cloud-based computing and other technology services. We have on occasion experienced, and will continue to experience, cyber threats to our data and systems. Cyber threats can create significant risks such as destruction of systems or data, denial or interruption of service, disruption of transaction execution, loss or exposure of customer data, theft or exposure of our intellectual property, theft of funds or disruption of other important business functions. The business we conduct with our third-party vendors may expose us to increased risk related to data security, service disruptions or effectiveness of our control system.

In addition, we are subject to numerous federal and state data privacy laws relating to the privacy of the nonpublic personal information of our customers, employees and others. The improper access, disclosure, or misuse or mishandling of information sent to or received from a customer, employee or third party could result in legal liability, regulatory action and reputational damage. Third parties on whom we rely for certain business processing functions are also subject to these risks, and their failure to adhere to these laws and regulations could negatively impact us.

We employ a company-wide cybersecurity program of technical, administrative, physical and disclosure controls intended to reduce the risk of cyber threats and protect our information, as well as to communicate potential material threats and incidents. Our cybersecurity philosophy and approach align to the National Institute of Standards and Technology Cybersecurity Framework and its core elements to identify, protect, detect, respond and recover from the various forms of cyber threats. Our practices include, but are not limited to, cybersecurity protocols and controls, system monitoring and detection, communication of incidents to appropriate management, vendor risk management, and ongoing privacy and cybersecurity training for employees and contractors concerning cyber risk. We periodically assess the effectiveness of our cybersecurity efforts including independent validation and verification and security assessments conducted by independent third parties. The number, complexity and sophistication of cyber threats continue to increase over time. The controls we have implemented, and continue

to develop, may not be sufficient to prevent events like unauthorized physical or electronic access, denial of service, cyber attacks, or other security breaches to our computer systems or those of third parties with whom we do business. In some cases, such events may not be immediately detected and/or the impact of such events immediately determined.

Our Board of Directors oversees our activities with respect to managing cyber risk through its Risk Committee. Management periodically reports on our cybersecurity risk management program including our risk evaluation and the results of independent third-party security assessments, and our efforts to mitigate cyber related risks.

To date, we are not aware of any material cybersecurity breach with respect to our systems or data. Any cyber incident or other security breach could cause disruption in our business operations and may result in other negative consequences including significant remediation costs, loss of revenue, additional regulatory scrutiny, fines, litigation, monetary damages and reputational harm. While we maintain cyber liability insurance to mitigate the financial risk around cyber incidents, such insurance may not cover all costs associated with the consequences of information or systems being compromised. As a result, in the event of a material cybersecurity breach, our business, cash flows, financial condition or results of operations could be materially, adversely affected.

If events occurred causing interruption of our operations, facilities, systems or business functions, it could have a material adverse effect on our operations and financial results.

We have an established business continuity plan to ensure the continuation of core business operations in the event that normal business operations could not be performed due to a catastrophic or other event. While we continue to test and assess our business continuity plan to ensure it meets the needs of our core business operations and addresses multiple business interruption events, there is no assurance that core business operations could be performed upon the occurrence of such an event. Systems failures or outages could compromise our ability to perform our business functions in a timely manner, which could harm our ability to conduct business and hurt our relationships with our business partners and customers. Our business continuity is also dependent on third-party systems on which our information technology systems interface and rely. Our systems and those of our third-party vendors may become vulnerable to damage or disruption due to circumstances beyond our or their control, such as from catastrophic events, power anomalies or outages, natural disasters, network failures, and viruses. The failure of our information systems for any reason could result in a material adverse effect on our business, cash flows, financial condition, or results of operations.

The performance of our investment portfolio is subject to a variety of investment risks, which may in turn have a material adverse effect on our results of operations or financial condition.

At December 31, 2019, our investment portfolio consisted of approximately 82% fixed maturity securities, with the remaining 18% invested in other investments, equity securities, and limited partnerships. Approximately 31% of our fixed maturity portfolio is expected to mature over the next three years. As our fixed maturity portfolio matures, the portfolio yield could be impacted by the types of investments available for reinvestment with proceeds of matured securities.

General economic conditions and other factors beyond our control can adversely affect the value of our investments and the realization of net investment income, or result in realized investment losses. In addition, downward economic trends also may have an adverse effect on our investment results by negatively impacting the business conditions and impairing credit for the issuers of securities held in our respective investment portfolios. This could reduce fair values of investments and generate significant unrealized losses or impairment charges which may adversely affect our financial results.

The performance of the fixed income portfolio is subject to a number of risks including, but not limited to:

- Interest rate risk - the risk of adverse changes in the value of fixed income securities as a result of increases in market interest rates.
- Investment credit risk - the risk that the value of certain investments may decrease due to the deterioration in financial condition of, or the liquidity available to, one or more issuers of those securities or, in the case of structured securities, due to the deterioration of the loans or other assets that underlie the securities, which, in each case, also includes the risk of permanent loss.
- Sector/Concentration risk - the risk that the portfolio may be too heavily concentrated in the securities of one or more issuers, sectors, or industries. Events or developments that have a negative impact on any particular industry, group of related industries, or geographic region may have a greater adverse effect on our investment portfolio to the extent that the portfolio is concentrated within those issuers, sectors, or industries.

- Liquidity risk - the risk that we will not be able to convert investment securities into cash on favorable terms and on a timely basis, or that we will not be able to sell them at all, when desired. Disruptions in the financial markets or a lack of buyers for the specific securities that we are trying to sell, could prevent us from liquidating securities or cause a reduction in prices to levels that are not acceptable to us.

Our equity securities have exposure to price risk. Equity markets, sectors, industries, and individual securities may also be subject to some of the same risks that affect our fixed income portfolio, as discussed above.

All of our fixed income and equity securities are subject to market volatility. To the extent that future market volatility negatively impacts our investments, our financial condition will be negatively impacted. We review the fixed income portfolio on a continuous basis to evaluate positions that might have incurred other-than-temporary declines in value. Inherent in management's evaluation of a security are assumptions and estimates about the operations of the issuer and its future earnings potential. The primary factors considered in our review of investment valuation include the extent and duration to which fair value is less than cost, historical operating performance and financial condition of the issuer, short- and long-term prospects of the issuer and its industry, specific events that occurred affecting the issuer, including rating downgrades, and, depending on the type of security, our intent to sell or our ability and intent to retain the investment for a period of time sufficient to allow for a recovery in value. As the process for determining impairments is highly subjective, changes in our assessments may have a material effect on our operating results and financial condition. See also Item 7A. "Quantitative and Qualitative Disclosures about Market Risk".

In July 2017, the United Kingdom's Financial Conduct Authority ("FCA"), which regulates the London Interbank Offered Rate ("LIBOR"), announced that it intends to phase out LIBOR by the end of 2021. After this date, the FCA will no longer require banks to make LIBOR submissions. Approximately 22% of our investment portfolio includes securities with LIBOR exposure where the stated final maturity date extends beyond December 31, 2021. For securities without adequate fallback provisions already in place, there are ongoing efforts to establish an alternative reference rate. The transition of our investments to an alternative reference rate may result in adverse changes to the value and return on those investments. Due to uncertainty surrounding alternative rates, we are unable to predict the overall effect of this change at this time.

Deteriorating capital and credit market conditions or a failure to accurately estimate capital needs may significantly affect our ability to meet liquidity needs and access capital.

Sufficient liquidity and capital levels are required to pay operating expenses, income taxes, and to provide the necessary resources to fund future growth opportunities, satisfy certain financial covenants, pay dividends on common stock, and repurchase common stock. Management estimates the appropriate level of capital necessary based upon current and projected results, which includes evaluating potential risks. Failure to accurately estimate our capital needs may have a material adverse effect on our financial condition until additional sources of capital can be obtained. Further, a deteriorating financial condition may create a negative perception of us by third parties, including investors, and financial institutions, which could impact our ability to access additional capital in the debt or equity markets.

Our primary sources of liquidity are management fee revenue and cash flows generated from our investment portfolio. In the event our current sources do not satisfy our liquidity needs, we have the ability to access our \$100 million bank revolving line of credit, from which there were no borrowings as of December 31, 2019, or liquidate assets in our investment portfolio. Volatility in the financial markets could limit our ability to sell certain of our fixed income securities or cause such investments to sell at deep discounts.

In the event these traditional sources of liquidity are not available, we may have to seek additional financing. Our access to funds will depend upon a number of factors including current market conditions, the availability of credit, market liquidity, and the timing of obtaining credit ratings. In deteriorating market conditions, there can be no assurance that we will obtain additional financing, or, if available, that the cost of financing will not substantially increase and affect our overall profitability.

We are subject to applicable insurance laws, tax statutes, and regulations, as well as claims and legal proceedings, which, if determined unfavorably, could have a material adverse effect on our business, results of operations, or financial condition.

We face a significant risk of litigation and regulatory investigations and actions in the ordinary course of operating our businesses including the risk of class action lawsuits. Our pending legal and regulatory actions include proceedings specific to us and others generally applicable to business practices in the industries in which we operate. In our operations, we are, have been, or may become subject to class actions and individual suits alleging, among other things, issues relating to sales or underwriting practices, payment of contingent or other sales commissions, product design, product disclosure, policy issuance and administration, charging excessive or impermissible fees on products, additional charges for premiums paid on a periodic

basis, recommending unsuitable products to customers, and breaching alleged fiduciary or other duties, including our obligations to indemnify directors and officers in connection with certain legal matters. We are also subject to litigation arising out of our general business activities such as contractual and employment relationships and claims regarding the infringement of the intellectual property of others. Plaintiffs in class action and other lawsuits against us may seek very large or indeterminate amounts, including punitive and treble damages, which may remain unknown for substantial periods of time. We are also subject to various regulatory inquiries, such as information requests, subpoenas, and books and record examinations from state and federal regulators and authorities. Changes in the way regulators administer those laws, tax statutes, or regulations could adversely impact our business, cash flows, results of operations, or financial condition.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Indemnity and the Exchange share a corporate home office complex in Erie, Pennsylvania, which comprises approximately 665,000 square feet. A new office building is being constructed to serve as part of our principal headquarters. The building is expected to be completed in 2020 and will add approximately 346,000 square feet to our existing home office complex. Additionally, we lease two office buildings and one warehouse facility from third parties. We are charged rent for the related square footage we occupy.

Indemnity and the Exchange also operate 25 field offices in 12 states to perform primarily claims-related activities. The Exchange owns seven field offices and the remaining field offices are leased from third parties. Commitments for properties leased from other parties expire periodically through 2027. We expect that most leases will be renewed or replaced upon expiration. Rental costs of shared facilities are allocated based upon usage or square footage occupied.

ITEM 3. LEGAL PROCEEDINGS**State Court Lawsuit Against Erie Indemnity Company.**

Erie Indemnity Company ("Indemnity") was named as a defendant in a complaint filed on August 1, 2012 by alleged subscribers of the Erie Insurance Exchange (the "Exchange") in the Court of Common Pleas Civil Division of Fayette County, Pennsylvania captioned Erie Insurance Exchange, an unincorporated association, by Joseph S. Sullivan and Anita Sullivan, Patricia R. Beltz, and Jenna L. DeBord, trustees ad litem v. Erie Indemnity Co. (the "Sullivan" lawsuit).

As subsequently amended, the complaint alleges that, beginning on September 1, 1997, Indemnity retained "Service Charges" (installment fees) and "Added Service Charges" (late fees and policy reinstatement charges) on policies written by Exchange and its insurance subsidiaries, which allegedly should have been paid to Exchange, in the amount of approximately \$308 million. In addition to their claim for monetary relief on behalf of Exchange, Plaintiffs seek an accounting of all so-called intercompany transactions between Indemnity and Exchange from 1996 to date. Plaintiffs allege that Indemnity breached its contractual, fiduciary, and equitable duties by retaining Service Charges and Added Service Charges that should have been retained by Exchange. Plaintiffs bring these same claims under three separate derivative-type theories. First, Plaintiffs purport to bring suit as members of Exchange on behalf of Exchange. Second, Plaintiffs purport to bring suit as trustees ad litem on behalf of Exchange. Third, Plaintiffs purport to bring suit on behalf of Exchange pursuant to Rule 1506 of the Pennsylvania Rules of Civil Procedure, which allows shareholders to bring suit derivatively on behalf of a corporation or similar entity.

Indemnity filed a motion in the state court in November 2012 seeking dismissal of the lawsuit. On December 19, 2013, the court granted Indemnity's motion in part, holding that the Pennsylvania Insurance Holding Company Act "provides the [Pennsylvania Insurance] Department with special competence to address the subject matter of plaintiff's claims" and referring "all issues" in the Sullivan lawsuit to the Pennsylvania Insurance Department (the "Department") for "its views and any determination." The court stayed all further proceedings and reserved decision on all other grounds for dismissal raised by Indemnity. Plaintiffs sought reconsideration of the court's order, and on January 13, 2014, the court entered a revised order affirming its prior order and clarifying that the Department "shall decide any and all issues within its jurisdiction." On January 30, 2014, Plaintiffs asked the court to certify its order to permit an immediate appeal to the Superior Court of Pennsylvania and to stay any proceedings in the Department pending completion of any appeal. On February 18, 2014, the court issued an order denying Plaintiffs' motion. On March 20, 2014, Plaintiffs filed a petition for review with the Superior Court, which was denied by the Superior Court on May 5, 2014.

The Sullivan matter was assigned to an Administrative Judge within the Department for determination. The parties agreed that an evidentiary hearing was not required, entered into a stipulated record, and submitted briefing to the Department. Oral argument was held before the Administrative Judge on January 6, 2015. On April 29, 2015, the Department issued a declaratory opinion and order: (1) finding that the transactions between Exchange and Indemnity in which Indemnity retained or received revenue from installment and other service charges from Exchange subscribers complied with applicable insurance laws and regulations and that Indemnity properly retained charges paid by Exchange policyholders for certain installment premium payment plans, dishonored payments, policy cancellations, and policy reinstatements; and (2) returning jurisdiction over the matter to the Fayette County Court of Common Pleas.

On May 26, 2015, Plaintiffs appealed the Department's decision to the Pennsylvania Commonwealth Court. Oral argument was held before the Commonwealth Court en banc on December 9, 2015. On January 27, 2016, the Commonwealth Court issued an opinion vacating the Department's ruling and directing the Department to return the case to the Court of Common Pleas, essentially holding that the primary jurisdiction referral of the trial court was improper at this time because the allegations of the complaint do not implicate the special competency of the Department.

On February 26, 2016, Indemnity filed a petition for allowance of appeal to the Pennsylvania Supreme Court seeking further review of the Commonwealth Court opinion. On March 14, 2016, Plaintiffs filed an answer opposing Indemnity's petition for allowance of appeal; and, on March 28, 2016, Indemnity sought permission to file a reply brief in further support of its petition for allowance of appeal. On August 10, 2016, the Pennsylvania Supreme Court denied Indemnity's petition for allowance of appeal; and the Sullivan lawsuit returned to the Court of Common Pleas of Fayette County.

On September 12, 2016, Plaintiffs filed a motion to stay the Sullivan lawsuit pending the outcome of the Federal Court Lawsuit they filed against Indemnity and former and current Directors of Indemnity on July 8, 2016. (See below.) Indemnity filed an opposition to Plaintiff's motion to stay on September 19, 2016; and filed amended preliminary objections seeking dismissal of the Sullivan lawsuit on September 20, 2016. The motion to stay and the amended preliminary objections remain pending. On June 27, 2018, Plaintiffs filed a motion for a status conference in the Sullivan lawsuit.

On July 30, 2018, the Court held a status conference and thereafter lifted the stay of proceedings. On September 28, 2018, Indemnity filed a Motion to Enforce the Federal Judgment in the Beltz II lawsuit, seeking dismissal of the Sullivan lawsuit with prejudice. On October 26, 2018, Plaintiffs filed an opposition to that Motion; and Indemnity filed a reply in further support on November 5, 2018. Oral argument was held on Indemnity's Motion to Enforce the Federal Judgment on November 20, 2018 and on July 30, 2019. The Motion to Enforce the Federal Judgment remains pending.

Indemnity believes that it continues to have meritorious legal and factual defenses to the Sullivan lawsuit and intends to vigorously defend against all allegations and requests for relief.

Federal Court Lawsuit Against Erie Indemnity Company and Directors

On February 6, 2013, a lawsuit was filed in the United States District Court for the Western District of Pennsylvania, captioned Erie Insurance Exchange, an unincorporated association, by members Patricia R. Beltz, Joseph S. Sullivan and Anita Sullivan, and Patricia R. Beltz, on behalf of herself and others similarly situate v. Richard L. Stover; J. Ralph Borneman, Jr.; Terrence W. Cavanaugh; Jonathan Hirt Hagen; Susan Hirt Hagen; Thomas B. Hagen; C. Scott Hartz; Claude C. Lilly, III; Lucian L. Morrison; Thomas W. Palmer; Martin P. Sheffield; Elizabeth H. Vorsheck; and Robert C. Wilburn (the "Beltz" lawsuit), by alleged policyholders of Exchange who are also the plaintiffs in the Sullivan lawsuit. The individuals named as defendants in the Beltz lawsuit were the then-current Directors of Indemnity.

As subsequently amended, the Beltz lawsuit asserts many of the same allegations and claims for monetary relief as in the Sullivan lawsuit. Plaintiffs purport to sue on behalf of all policyholders of Exchange, or, alternatively, on behalf of Exchange itself. Indemnity filed a motion to intervene as a Party Defendant in the Beltz lawsuit in July 2013, and the Directors filed a motion to dismiss the lawsuit in August 2013. On February 10, 2014, the court entered an order granting Indemnity's motion to intervene and permitting Indemnity to join the Directors' motion to dismiss; granting in part the Directors' motion to dismiss; referring the matter to the Department to decide any and all issues within its jurisdiction; denying all other relief sought in the Directors' motion as moot; and dismissing the case without prejudice. To avoid duplicative proceedings and expedite the Department's review, the Parties stipulated that only the Sullivan action would proceed before the Department and any final and non-appealable determinations made by the Department in the Sullivan action will be applied to the Beltz action.

On March 7, 2014, Plaintiffs filed a notice of appeal to the United States Court of Appeals for the Third Circuit. Indemnity filed a motion to dismiss the appeal on March 26, 2014. On November 17, 2014, the Third Circuit deferred ruling on Indemnity's motion to dismiss the appeal and instructed the parties to address that motion, as well as the merits of Plaintiffs' appeal, in the parties' briefing. Briefing was completed on April 2, 2015. In light of the Department's April 29, 2015 decision in Sullivan, the Parties then jointly requested that the Beltz appeal be voluntarily dismissed as moot on June 5, 2015. The Third Circuit did not rule on the Parties' request for dismissal and instead held oral argument as scheduled on June 8, 2015. On July 16, 2015, the Third Circuit issued an opinion and judgment dismissing the appeal. The Third Circuit found that it lacked appellate jurisdiction over the appeal, because the District Court's February 10, 2014 order referring the matter to the Department was not a final, appealable order.

On July 8, 2016, the Beltz plaintiffs filed a new action labeled as a "Verified Derivative And Class Action Complaint" in the United States District Court for the Western District of Pennsylvania. The action is captioned Patricia R. Beltz, Joseph S. Sullivan, and Anita Sullivan, individually and on behalf of all others similarly situated, and derivatively on behalf of Nominal Defendant Erie Insurance Exchange v. Erie Indemnity Company; Kaj Ahlmann; John T. Baily; Samuel P. Black, III; J. Ralph Borneman, Jr.; Terrence W. Cavanaugh; Wilson C. Cooney; LuAnn Datesh; Patricia A. Goldman; Jonathan Hirt Hagen; Thomas B. Hagen; C. Scott Hartz; Samuel P. Katz; Gwendolyn King; Claude C. Lilly, III; Martin J. Lippert; George R. Lucore; Jeffrey A. Ludrof; Edmund J. Mehl; Henry N. Nassau; Thomas W. Palmer; Martin P. Sheffield; Seth E. Schofield; Richard L. Stover; Jan R. Van Gorder; Elizabeth A. Hirt Vorsheck; Harry H. Weil; and Robert C. Wilburn (the "Beltz II" lawsuit). The individual defendants are all present or former Directors of Indemnity (the "Directors").

The allegations of the Beltz II lawsuit arise from the same fundamental, underlying claims as the Sullivan and prior Beltz litigation, i.e., that Indemnity improperly retained Service Charges and Added Service Charges. The Beltz II lawsuit alleges that the retention of the Service Charges and Added Service Charges was improper because, for among other reasons, that retention constituted a breach of the Subscriber's Agreement and an Implied Covenant of Good Faith and Fair Dealing by Indemnity, breaches of fiduciary duty by Indemnity and the other defendants, conversion by Indemnity, and unjust enrichment by defendants Jonathan Hirt Hagen, Thomas B. Hagen, and Elizabeth A. Hirt Vorsheck, at the expense of Exchange. The Beltz II lawsuit requests, among other things, that a judgment be entered against the Defendants certifying the action as a class action pursuant to Rule 23 of the Federal Rules of Civil Procedure; declaring Plaintiffs as representatives of the Class and Plaintiffs' counsel as counsel for the Class; declaring the conduct alleged as unlawful, including, but not limited to, Defendants' retention of the Service Charges and Added Service Charges; enjoining Defendants from continuing to retain the Service Charges and Added Service Charges; and awarding compensatory and punitive damages and interest.

On September 23, 2016, Indemnity filed a motion to dismiss the Beltz II lawsuit. On September 30, 2016, the Directors filed their own motions to dismiss the Beltz II lawsuit. On July 17, 2017, the Court granted Indemnity's and the Directors' motions to dismiss the Beltz II lawsuit, dismissing the case in its entirety. The Court ruled that "the Subscriber's Agreement does not govern the separate and additional charges at issue in the Complaint" and, therefore, dismissed the breach of contract claim against Indemnity for failure to state a claim. The Court also ruled that the remaining claims, including the claims for breach of fiduciary duty against Indemnity and the Directors, are barred by the applicable statutes of limitation or fail to state legally cognizable claims. On August 14, 2017, Plaintiffs filed a notice of appeal to the United States Court of Appeals for the Third Circuit.

On May 10, 2018, the United States Court of Appeals for the Third Circuit affirmed the District Court's dismissal of the Beltz II lawsuit. On May 24, 2018, Plaintiffs filed a petition seeking rehearing of their appeal before the Third Circuit. The Third Circuit denied that petition on June 14, 2018.

For additional information on contingencies, see Part II, Item 8. "Financial Statements and Supplementary Data - Note 17, Commitment and Contingencies, of Notes to Financial Statements".

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

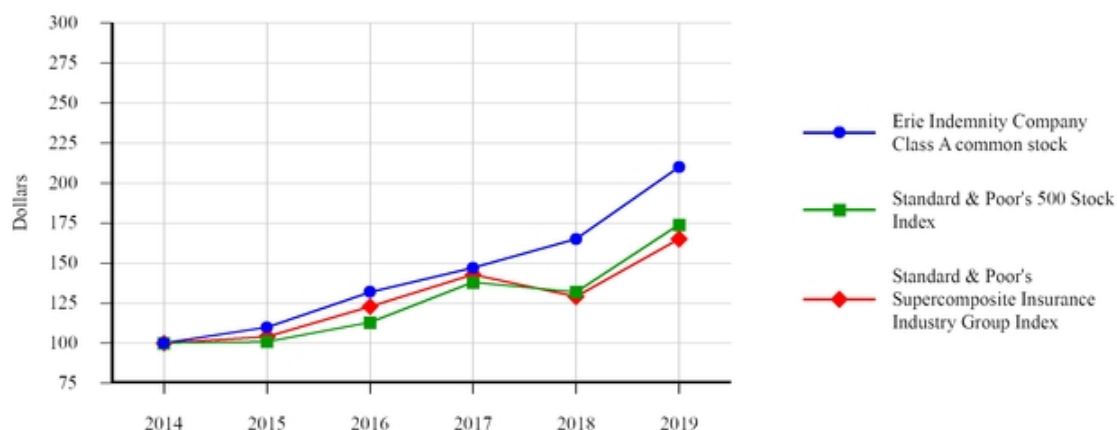
Common Stock Market Prices and Dividends

Our Class A, non-voting common stock trades on The NASDAQ Stock MarketSM LLC under the symbol "ERIE". No established trading market exists for the Class B voting common stock. Broadridge Corporate Issuer Solutions, Inc. serves as our transfer agent and registrar. As of February 21, 2020, there were approximately 581 shareholders of record for the Class A non-voting common stock and 9 shareholders of record for the Class B voting common stock.

Historically, we have declared and paid cash dividends on a quarterly basis at the discretion of the Board of Directors. The payment and amount of future dividends on the common stock will be determined by the Board of Directors and will depend upon, among other things, our operating results, financial condition, cash requirements, and general business conditions at the time such payment is considered.

Stock Performance

The following graph depicts the cumulative total shareholder return, assuming reinvestment of dividends, for the periods indicated for our Class A common stock compared to the Standard & Poor's 500 Stock Index and the Standard & Poor's Supercomposite Insurance Industry Group Index. The Standard & Poor's Supercomposite Insurance Industry Group Index is made up of 54 constituent members represented by property and casualty insurers, insurance brokers, and life insurers, and is a capitalization weighted index.



	2014	2015	2016	2017	2018	2019
Erie Indemnity Company Class A common stock	\$ 100 ⁽¹⁾	\$ 110	\$ 132	\$ 147	\$ 165	\$ 210
Standard & Poor's 500 Stock Index	100 ⁽¹⁾	101	113	138	132	174
Standard & Poor's Supercomposite Insurance Industry Group Index	100 ⁽¹⁾	104	123	143	129	165

(1) Assumes \$100 invested at the close of trading, including reinvestment of dividends, on the last trading day preceding the first day of the fifth preceding fiscal year, in our Class A common stock, the Standard & Poor's 500 Stock Index, and the Standard & Poor's Supercomposite Insurance Industry Group Index.

Issuer Purchases of Equity Securities

We may purchase shares, from time-to-time, in the open market, through trading plans entered into with one or more brokerage firms pursuant to Rule 10b5-1 under the Securities Exchange Act of 1934, or through privately negotiated transactions. The purchase of shares is dependent upon prevailing market conditions and alternate uses of capital, and at times and in a manner that is deemed appropriate.

Our Board of Directors authorized a stock repurchase program effective January 1, 1999, allowing the repurchase of our outstanding Class A nonvoting common stock. Various approvals for continuation of this program have since been authorized, with the most recent occurring in 2011 for \$150 million, which was authorized with no time limitation. There were no repurchases of our Class A common stock under this program during the quarter ending December 31, 2019. We had approximately \$17.8 million of repurchase authority remaining under this program, based upon trade date, at both December 31, 2019 and February 21, 2020.

See Part II, Item 8. "Financial Statements and Supplementary Data – Note 13, Capital Stock, of Notes to Financial Statements" contained within this report for discussion of additional shares purchased outside of this program.

ITEM 6. SELECTED FINANCIAL DATA

(in thousands, except per share data)

	Years Ended December 31,				
	2019	2018	2017	2016	2015
Operating Data:					
Operating revenue ⁽¹⁾	\$ 2,477,298	\$ 2,382,212	\$ 1,691,774	\$ 1,596,631	\$ 1,505,508
Operating expenses ⁽¹⁾	2,119,959	2,037,869	1,401,522	1,303,114	1,272,967
Investment income	39,967	25,796	28,592	27,839	33,708
Interest expense and other (income), net	601	(1,181)	3,149	1,265	—
Income before income taxes	396,705	371,320	315,695	320,091	266,249
Net income ⁽²⁾	316,821	288,224	196,999	210,366	174,678
Per Share Data:					
Net income per Class A share – diluted ⁽²⁾	\$ 6.06	\$ 5.51	\$ 3.76	\$ 4.01	\$ 3.33
Book value per share – Class A common and equivalent B shares	21.67	18.62	16.40	15.62	14.72
Dividends declared per Class A share	3.665	3.42	3.1875	2.9725	2.773
Dividends declared per Class B share	549.75	513.00	478.125	445.875	415.95
Financial Position Data:					
Investments	\$ 824,609	\$ 795,197	\$ 803,835	\$ 771,450	\$ 688,476
Receivables from Erie Insurance Exchange and affiliates	468,636	449,873	418,328	378,540	348,055
Current and long-term borrowings	97,821	99,730	74,728	24,766	—
Total assets	2,016,240	1,778,327	1,665,859	1,548,955	1,407,296
Total equity ⁽³⁾	1,133,253	973,672	857,344	816,910	769,503

(1) In accordance with Accounting Standards Codification 606, "Revenue from Contracts with Customers" ("ASC 606"), effective January 1, 2018, we allocate our management fee between the two performance obligations we have in the subscriber's agreement, policy issuance and renewal services and administrative services. We also present expenses we incur and the related reimbursements we receive for administrative services gross in our Statement of Operations. See Part II, Item 8. "Financial Statements and Supplementary Data - Note 2, Significant Accounting Policies, of Notes to Financial Statements" contained within this report.

(2) The corporate tax rate was 35% for years 2015-2017 and was reduced to 21% in 2018 with the enactment of the Tax Cuts and Jobs Act. This, coupled with increased operating income, drove the increase in net income and net income per Class A share - diluted in 2018 when compared to 2017.

(3) On January 1, 2018, we adopted ASC 606 and recorded a cumulative effect adjustment that reduced retained earnings by \$38.3 million. See Part II, Item 8. "Financial Statements and Supplementary Data - Note 2, Significant Accounting Policies, of Notes to Financial Statements" contained within this report.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion of financial condition and results of operations highlights significant factors influencing Erie Indemnity Company ("Indemnity", "we", "us", "our"). This discussion should be read in conjunction with the audited financial statements and related notes and all other items contained within this Annual Report on Form 10-K as these contain important information helpful in evaluating our financial condition and results of operations.

INDEX

	Page Number
Cautionary Statement Regarding Forward-Looking Information	18
Recently Adopted Accounting Standards	19
Recent Accounting Standards	19
Operating Overview	20
Critical Accounting Estimates	22
Results of Operations	26
Financial Condition	32
Investments	32
Shareholders' Equity	33
Home Office Expansion	34
Liquidity and Capital Resources	35
Transactions/Agreements with Related Parties	38

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION**"Safe Harbor" Statement under the Private Securities Litigation Reform Act of 1995:**

Statements contained herein that are not historical fact are forward-looking statements and, as such, are subject to risks and uncertainties that could cause actual events and results to differ, perhaps materially, from those discussed herein. Forward-looking statements relate to future trends, events or results and include, without limitation, statements and assumptions on which such statements are based that are related to our plans, strategies, objectives, expectations, intentions, and adequacy of resources. Examples of forward-looking statements are discussions relating to premium and investment income, expenses, operating results, and compliance with contractual and regulatory requirements. Forward-looking statements are not guarantees of future performance and involve risks and uncertainties that are difficult to predict. Therefore, actual outcomes and results may differ materially from what is expressed or forecasted in such forward-looking statements. Among the risks and uncertainties, in addition to those set forth in our filings with the Securities and Exchange Commission, that could cause actual results and future events to differ from those set forth or contemplated in the forward-looking statements include the following:

- dependence upon our relationship with the Exchange and the management fee under the agreement with the subscribers at the Exchange;
- dependence upon our relationship with the Exchange and the growth of the Exchange, including:
 - general business and economic conditions;
 - factors affecting insurance industry competition;
 - dependence upon the independent agency system; and
 - ability to maintain our reputation for customer service;
- dependence upon our relationship with the Exchange and the financial condition of the Exchange, including:
 - the Exchange's ability to maintain acceptable financial strength ratings;
 - factors affecting the quality and liquidity of the Exchange's investment portfolio;
 - changes in government regulation of the insurance industry;
 - emerging claims and coverage issues in the industry; and
 - severe weather conditions or other catastrophic losses, including terrorism;
- costs of providing policy issuance and renewal services to the Exchange under the subscriber's agreement;
- ability to attract and retain talented management and employees;
- ability to ensure system availability and effectively manage technology initiatives;
- difficulties with technology or data security breaches, including cyber attacks;

- ability to maintain uninterrupted business operations;
- factors affecting the quality and liquidity of our investment portfolio;
- our ability to meet liquidity needs and access capital; and
- outcome of pending and potential litigation.

A forward-looking statement speaks only as of the date on which it is made and reflects our analysis only as of that date. We undertake no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events, changes in assumptions, or otherwise.

RECENTLY ADOPTED ACCOUNTING STANDARDS

In 2018, we adopted Accounting Standards Codifications ("ASC") 606, *"Revenue from Contracts with Customers"*. Upon adoption, we determined we have two performance obligations in the subscriber's agreement, providing policy issuance and renewal services and acting as attorney-in-fact for the Exchange, as well as the service provider for its insurance subsidiaries, with respect to all administrative services. We earn management fees for acting as the attorney-in-fact for the subscribers at the Exchange in these two capacities. Upon adoption of ASC 606, we are required to allocate our revenues between our performance obligations. Prior to the adoption of ASC 606, the entire management fee was allocated to the policy issuance and renewal services. Additionally, the expenses we incur and related reimbursements we receive for administrative services are presented gross in our Statement of Operations effective January 1, 2018. (See Part II, Item 8. "Financial Statements and Supplementary Data - Note 2, Significant Accounting Policies, of Notes to Financial Statements" contained within this report.)

RECENT ACCOUNTING STANDARDS

See Part II, Item 8. "Financial Statements and Supplementary Data - Note 2, Significant Accounting Policies, of Notes to Financial Statements" contained within this report for a discussion of recently adopted as well as other recently issued accounting standards and the impact on our financial statements if known.

OPERATING OVERVIEW**Overview**

We are a Pennsylvania business corporation that since 1925 has been the managing attorney-in-fact for the subscribers (policyholders) at the Erie Insurance Exchange ("Exchange"), a reciprocal insurer that writes property and casualty insurance. Our primary function as attorney-in-fact is to perform policy issuance and renewal services on behalf of the subscribers at the Exchange. We also act as attorney-in-fact on behalf of the Exchange, as well as the service provider for its insurance subsidiaries, with respect to all administrative services.

The Exchange is a reciprocal insurance exchange, which is an unincorporated association of individuals, partnerships and corporations that agree to insure one another. Each applicant for insurance to the Exchange signs a subscriber's agreement, which contains an appointment of Indemnity as their attorney-in-fact to transact the business of the Exchange on their behalf.

Pursuant to the subscriber's agreement for acting as attorney-in-fact in these two capacities, we earn a management fee. Management fee revenue is based upon all direct and affiliated assumed premiums written by the Exchange and the management fee rate, which is not to exceed 25%. Our Board of Directors establishes the management fee rate at least annually, generally in December for the following year. The process of setting the management fee rate includes the evaluation of current year operating results compared to both prior year and industry estimated results for both Indemnity and the Exchange, and consideration of several factors for both entities including: their relative financial strength and capital position; projected revenue, expense and earnings for the subsequent year; future capital needs; as well as competitive position. The management fee rate was set at 25% for 2019, 2018 and 2017. Our Board of Directors set the 2020 management fee rate again at 25%, its maximum level.

Our earnings are primarily driven by the management fee revenue generated for the services we provide to the Exchange. The policy issuance and renewal services we provide to the Exchange are related to the sales, underwriting and issuance of policies. The sales related services we provide include agent compensation and certain sales and advertising support services. Agent compensation includes scheduled commissions to agents based upon premiums written as well as additional commissions and bonuses to agents, which are earned by achieving targeted measures. Agent compensation comprised approximately 67% of our 2019 policy issuance and renewal expenses. The underwriting services we provide include underwriting and policy processing and comprised approximately 10% of our 2019 policy issuance and renewal expenses. The remaining services we provide include customer service and administrative support. We also provide information technology services that support all the functions listed above that comprised approximately 11% of our 2019 policy issuance and renewal expenses. Included in these expenses are allocations of costs for departments that support these policy issuance and renewal functions.

By virtue of its legal structure as a reciprocal insurer, the Exchange does not have any employees or officers. Therefore, it enters into contractual relationships by and through an attorney-in-fact. Indemnity serves as the attorney-in-fact on behalf of the Exchange with respect to its administrative services. The Exchange's insurance subsidiaries also utilize Indemnity for these services in accordance with the service agreements between each of the subsidiaries and Indemnity. Claims handling services include costs incurred in the claims process, including the adjustment, investigation, defense, recording and payment functions. Life insurance management services include costs incurred in the management and processing of life insurance business. Investment management services are related to investment trading activity, accounting and all other functions attributable to the investment of funds. Included in these expenses are allocations of costs for departments that support these administrative functions. The amounts incurred for these services are reimbursed to Indemnity at cost in accordance with the subscriber's agreement and the service agreements. State insurance regulations require that intercompany service agreements and any material amendments be approved in advance by the state insurance department.

Our results of operations are tied to the growth and financial condition of the Exchange as the Exchange is our sole customer, and our earnings are largely generated from management fees based on the direct and affiliated assumed premiums written by the Exchange. The Exchange generates revenue by insuring preferred and standard risks, with personal lines comprising 71% of the 2019 direct and affiliated assumed written premiums and commercial lines comprising the remaining 29%. The principal personal lines products are private passenger automobile and homeowners. The principal commercial lines products are commercial multi-peril, commercial automobile and workers compensation.

We generate investment income from our fixed maturity and equity security portfolios. Our portfolio is managed with the objective of maximizing after-tax returns on a risk-adjusted basis. We actively evaluate the portfolios for impairments, and record impairment write-downs on investments in instances where the fair value of the investment is substantially below cost, and it is concluded that the decline in fair value is other-than-temporary, which includes consideration for intent to sell.

Financial Overview

	Years ended December 31,					
	2019	% Change	2018	% Change	2017	
<i>(dollars in thousands, except per share data)</i>						
Operating income	\$ 357,339	3.8 %	\$ 344,343	18.6 %	\$ 290,252	
Total investment income	39,967	54.9	25,796	(9.8)	28,592	
Interest expense, net	856	(65.2)	2,460	98.8	1,238	
Other income (expense)	255	(93.0)	3,641	NM	(1,911)	
Income before income taxes	396,705	6.8	371,320	17.6	315,695	
Income tax expense	79,884	(3.9)	83,096	(30.0)	118,696	
Net income	\$ 316,821	9.9 %	\$ 288,224	46.3 %	\$ 196,999	
Net income per share - diluted	\$ 6.06	9.9 %	\$ 5.51	46.4 %	\$ 3.76	

NM = not meaningful

Operating income increased at a slower pace in 2019 compared to 2018 as growth in operating expenses outpaced the growth in operating revenues. Management fee revenue is based upon the management fee rate we charge and the direct and affiliated assumed premiums written by the Exchange. The management fee rate was 25% for 2019, 2018, and 2017. The direct and affiliated assumed premiums written by the Exchange increased 5.2% to \$7.5 billion in 2019 and 6.9% to \$7.1 billion in 2018. Cost of operations for policy issuance and renewal services increased 5.5% in 2019 primarily due to higher commissions driven by direct and affiliated assumed written premium growth and higher investments in information technology. Cost of operations for policy issuance and renewal services increased 4.0% in 2018 driven primarily by higher commissions. Offsetting some of the increase in operating expenses in both periods were lower agent and employee incentive costs related to less profitable growth on the property and casualty insurance business of the Exchange.

The administrative services reimbursement revenue and corresponding cost of operations increased both total operating revenue and total operating expenses by \$582.0 million and \$580.3 million in 2019 and 2018, but had no net impact on operating income.

Total investment income increased \$14.2 million in 2019 driven primarily by net realized investment gains and higher net investment income. Total investment income decreased \$2.8 million in 2018 driven by lower earnings generated from limited partnership investments and higher net realized investment losses, partially offset by higher net investment income.

In 2019, income tax expense was reduced by \$4.0 million as a result of settling an uncertain tax position, which decreased our effective tax rate by 1.0%. The decrease in income tax expense in 2018 compared to 2017 was primarily due to the decrease in the corporate income tax rate from 35% to 21% effective January 1, 2018.

General Conditions and Trends Affecting Our Business

Economic conditions

Unfavorable changes in economic conditions, including declining consumer confidence, inflation, high unemployment, and the threat of recession, among others, may lead the Exchange's customers to modify coverage, not renew policies, or even cancel policies, which could adversely affect the premium revenue of the Exchange, and consequently our management fee. Further, unanticipated increased inflation costs including medical cost inflation, construction and auto repair cost inflation, and tort issues may impact the estimated loss reserves and future premium rates. If any of these items impacted the financial condition or continuing operations of the Exchange, it could have an impact on our financial results.

Financial market volatility

Our portfolio of fixed maturity, equity security, and limited partnership investments is subject to market volatility especially in periods of instability in the worldwide financial markets. Over time, net investment income could also be impacted by volatility and by the general level of interest rates, which impact reinvested cash flow from the portfolio and business operations. Depending upon market conditions, which are unpredictable and remain uncertain, considerable fluctuation could exist in the fair value of our investment portfolio and reported total investment income, which could have an adverse impact on our financial condition, results of operations, and cash flows.

CRITICAL ACCOUNTING ESTIMATES

The financial statements include amounts based upon estimates and assumptions that have a significant effect on reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period and related disclosures. We consider an accounting estimate to be critical if 1) it requires assumptions to be made that were uncertain at the time the estimate was made, and 2) different estimates that could have been used, or changes in the estimate that are likely to occur from period-to-period, could have a material impact on our Statements of Operations or Financial Position.

The following presents a discussion of those accounting policies surrounding estimates that we believe are the most critical to our reported amounts and require the most subjective and complex judgment. If actual events differ significantly from the underlying assumptions, there could be material adjustments to prior estimates that could potentially adversely affect our results of operations, financial condition, and cash flows. The estimates and the estimating methods used are reviewed continually, and any adjustments considered necessary are reflected in current earnings.

Investment ValuationAvailable-for-sale securities

We make estimates concerning the valuation of all investments. Valuation techniques are used to derive the fair value of the available-for-sale securities we hold. Fair value is the price that would be received to sell an asset in an orderly transaction between willing market participants at the measurement date.

Fair value measurements are based upon observable and unobservable inputs. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect our view of market assumptions in the absence of observable market information. We utilize valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs.

For purposes of determining whether the market is active or inactive, the classification of a financial instrument is based upon the following definitions:

- An active market is one in which transactions for the assets being valued occur with sufficient frequency and volume to provide reliable pricing information.
- An inactive (illiquid) market is one in which there are few and infrequent transactions, where the prices are not current, price quotations vary substantially, and/or there is little information publicly available for the asset being valued.

We continually assess whether or not an active market exists for all of our investments and as of each reporting date re-evaluate the classification in the fair value hierarchy. All assets carried at fair value are classified and disclosed in one of the following three categories:

- Level 1 – Quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity can access at the measurement date.
- Level 2 – Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3 – Unobservable inputs for the asset or liability.

Level 1 reflects market data obtained from independent sources, such as prices obtained from an exchange or a nationally recognized pricing service for identical instruments in active markets and primarily includes preferred stock.

Level 2 includes those financial instruments that are valued using industry-standard models that consider various inputs, such as the interest rate and credit spread for the underlying financial instruments. All significant inputs are observable, or derived from observable information in the marketplace, or are supported by observable levels at which transactions are executed in the marketplace. Financial instruments in this category primarily include U.S. government & agency securities, corporate bonds, municipal bonds, structured securities and preferred stock.

Level 3 securities are valued based upon unobservable inputs, reflecting our estimates of value based upon assumptions used by market participants. Securities are also assigned to Level 3 in cases where non-binding broker quotes are significant to the

valuation and there is a lack of transparency as to whether these quotes are based upon information that is observable in the marketplace. Fair value estimates for securities valued using unobservable inputs require significant judgment due to the illiquid nature of the market for these securities and represent the best estimate of the fair value that would occur in an orderly transaction between willing market participants at the measurement date under current market conditions. Fair value for these securities is generally valued using an estimate of fair value based upon indicative market prices that include significant unobservable inputs not based upon, nor corroborated by, market information, including the utilization of discounted cash flow analyses which have been risk-adjusted to take into account illiquidity and other market factors. This category primarily consists of corporate bonds and structured securities.

As of each reporting period, financial instruments recorded at fair value are classified based upon the lowest level of input that is significant to the fair value measurement. The presence of at least one unobservable input that has significant impact to the fair value measurement would result in classification as a Level 3 instrument. Our assessment of the significance of a particular input to the fair value measurement requires judgment, and considers factors specific to the asset, such as the relative impact on the fair value as a result of including a particular input and market conditions. We did not make any other significant judgments except as described above.

Estimates of fair values for our investment portfolio are obtained primarily from a nationally recognized pricing service. Our Level 1 securities are valued using an exchange traded price provided by the pricing service. Pricing service valuations for Level 2 securities include multiple verifiable, observable inputs including benchmark yields, reported trades, broker/dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, and reference data. Pricing service valuations for Level 3 securities are based upon proprietary models and are used when observable inputs are not available or in illiquid markets.

Although virtually all of our prices are obtained from third party sources, we also perform internal pricing reviews, including evaluating the methodology and inputs used to ensure that we determine the proper classification level of the financial instrument and reviewing securities with price changes that vary significantly from current market conditions or independent third party price sources. Price variances are investigated and corroborated by market data and transaction volumes. We have reviewed the pricing methodologies of our pricing service as well as other observable inputs and believe that the prices adequately consider market activity in determining fair value.

In limited circumstances we adjust the price received from the pricing service when, in our judgment, a better reflection of fair value is available based upon corroborating information and our knowledge and monitoring of market conditions such as a disparity in price of comparable securities and/or non-binding broker quotes. In other circumstances, certain securities are internally priced because prices are not provided by the pricing service.

When a price from the pricing service is not available, values are determined by obtaining broker/dealer quotes and/or market comparables. When available, we obtain multiple quotes for the same security. The ultimate value for these securities is determined based upon our best estimate of fair value using corroborating market information. Our evaluation includes the consideration of benchmark yields, reported trades, issuer spreads, two-sided markets, benchmark securities, bids, offers, and reference data.

Other-than-temporary impairments

Available-for-sale securities are evaluated monthly for other-than-temporary impairment loss. For securities that have experienced a decline in fair value below amortized cost and that we intend to sell, or for which it is more likely than not we will be required to sell the security before recovery of its amortized cost, an other-than-temporary impairment is recognized in earnings. Securities that have experienced a decline in fair value and that we do not intend to sell, and that we will not be required to sell before recovery, are evaluated to determine if the decline in fair value is other-than-temporary. Some factors considered in this evaluation include the extent and duration to which fair value is less than cost, historical operating performance and financial condition of the issuer, short and long-term prospects of the issuer and its industry based upon analysts' recommendations, specific events that occurred affecting the issuer, including a ratings downgrade, near term liquidity position of the issuer and compliance with financial covenants.

If a decline is deemed to be other-than-temporary, an assessment is made to determine the amount of the total impairment related to a credit loss and that related to all other factors. Consideration is given to all available information relevant to the collectability of the security in this determination. When the entire amortized cost basis of the security will not be recovered, a credit loss exists. For securities with credit impairments that we did not intend to sell, the credit portion of the loss would be recorded through net income and the non-credit portion of the impairment would be recorded in other comprehensive income. Currently, we have the intent to sell all of our securities that have been determined to have a credit-related impairment. As a result, the entire amount of any impairment is recognized in earnings.

Retirement Benefit Plans for Employees

Our pension plans consist of a noncontributory defined benefit pension plan covering substantially all employees and an unfunded supplemental employee retirement plan ("SERP") for certain members of executive and senior management. Although we are the sponsor of these postretirement plans and record the funded status of these plans, the Exchange and its subsidiaries reimburse us for approximately 59% of the annual benefit expense of these plans, which includes pension benefits for employees performing administrative services and the Exchange's allocated share of costs for employees in departments that support the administrative functions.

Our pension obligation is developed from actuarial estimates. Several statistical and other factors, which attempt to anticipate future events, are used in calculating the expense and liability related to the plans. Key factors include assumptions about the discount rates and expected rates of return on plan assets. We review these assumptions annually and modify them considering historical experience, current market conditions, including changes in investment returns and interest rates, and expected future trends.

Accumulated and projected benefit obligations are expressed as the present value of future cash payments. We discount those cash payments based upon a yield curve developed from corporate bond yield information with maturities that correspond to the payment of benefits. Lower discount rates increase present values and subsequent year pension expense, while higher discount rates decrease present values and subsequent year pension expense. The construction of the yield curve is based upon yields of corporate bonds rated AA or equivalent quality. Target yields are developed from bonds at various maturity points and a curve is fitted to those targets. Spot rates (zero coupon bond yields) are developed from the yield curve and used to discount benefit payment amounts associated with each future year. The present value of plan benefits is calculated by applying the spot/discount rates to projected benefit cash flows. A single discount rate is then developed to produce the same present value. The cash flows from the yield curve were matched against our projected benefit payments in the pension plan, which have a duration of about 19 years. This yield curve supported the selection of a 3.59% discount rate for the projected benefit obligation at December 31, 2019 and for the 2020 pension expense. The same methodology was used to develop the 4.47% and 3.73% discount rates used to determine the projected benefit obligation for 2018 and 2017, respectively, and the pension expense for 2019 and 2018, respectively. A 25 basis point decrease in the discount rate assumption, with other assumptions held constant, would increase pension cost in the following year by \$5.5 million, of which our share would be approximately \$2.3 million, and would increase the pension benefit obligation by \$48.3 million.

Unrecognized actuarial gains and losses arise from several factors, including experience and assumption changes in the obligations and from the difference between expected returns and actual returns on plan assets. These unrecognized gains and losses are recorded in the pension plan obligation and accumulated other comprehensive income (loss). These amounts are systematically recognized to net periodic pension expense in future periods, with gains decreasing and losses increasing future pension expense. If actuarial net gains or losses exceed 5% of the greater of the projected benefit obligation and the market-related value of plan assets, the excess is recognized through the net periodic pension expense equally over the estimated service period of the employee group, which is currently 14 years.

The expected long-term rate of return for the pension plan represents the average rate of return to be earned on plan assets over the period the benefits included in the benefit obligation are to be paid. To determine the expected long-term rate of return assumption, we utilized models based upon rigorous historical analysis and forward-looking views of the financial markets based upon key factors such as historical returns for the asset class' applicable indices, the correlations of the asset classes under various market conditions and consensus views on future real economic growth and inflation. The expected future return for each asset class is then combined by considering correlations between asset classes and the volatilities of each asset class to produce a reasonable range of asset return results within which our expected long-term rate of return assumption falls. The expected long-term rate of return is less susceptible to annual revisions, as there are typically no significant changes in the asset mix. Based on the current asset allocation and a review of the key factors and expectations of future asset performance, the expected return on asset assumption remained at 6.00% for 2020. A change of 25 basis points in the expected long-term rate of return assumption, with other assumptions held constant, would have an estimated \$2.1 million impact on net pension benefit cost in the following year, of which our share would be approximately \$0.9 million.

We use a four-year averaging method to determine the market-related value of plan assets, which is used to determine the expected return component of pension expense. Under this methodology, asset gains or losses that result from returns that differ from our long-term rate of return assumption are recognized in the market-related value of assets on a level basis over a four-year period. The market-related asset experience during 2019 that related to the actual investment return being different from that assumed during the prior year was a gain of \$134.5 million. Recognition of this gain will be deferred and recognized over a four-year period, consistent with the market-related asset value methodology. Once factored into the market-related asset value, these experience gains and losses will be amortized over a period of 14 years, which is the remaining service period of the employee group.

Estimates of fair values of the pension plan assets are obtained primarily from the trustee and custodian of our pension plan. Our Level 1 category includes a money market mutual fund for which the fair value is determined using an exchange traded price provided by the trustee and custodian. Our Level 2 category includes commingled pools. Estimates of fair values for securities held by our commingled pools are obtained primarily from the trustee and custodian. Trustee and custodian valuation methodologies for Level 2 securities include multiple verifiable, observable inputs including benchmark yields, reported trades, broker/dealer quotes, issuers spreads, two-sided markets, benchmark securities, bids, offers, and reference data. There were no Level 3 investments in 2019 or 2018.

We expect our net pension benefit costs to increase from \$32.2 million in 2019 to \$46.6 million in 2020 primarily due to the lower discount rate, partially offset by higher than expected asset returns during 2019. Our share of the net pension benefit costs after reimbursements was \$13.2 million in 2019. We expect our share of the net pension benefit costs to be approximately \$19.1 million in 2020.

The actuarial assumptions we used in determining our pension obligation may differ materially from actual results due to changing market and economic conditions, higher or lower withdrawal rates, or longer or shorter life spans of participants. While we believe that the assumptions used are appropriate, differences in actual experience or changes in assumptions may materially affect our financial position, results of operations, or cash flows. See Part II, Item 8. "Financial Statements and Supplementary Data - Note 10, Postretirement Benefits, of Notes to Financial Statements" contained within this report for additional details on the pension plans.

RESULTS OF OPERATIONS

Management fee revenue

In 2018, we adopted ASC 606, "Revenue from Contracts with Customers". Upon adoption, we determined we have two performance obligations in the subscriber's agreement, providing policy issuance and renewal services and acting as attorney-in-fact for the Exchange, as well as the service provider for its insurance subsidiaries, with respect to all administrative services. We earn management fees for acting as the attorney-in-fact for the subscribers at the Exchange in these two capacities. Upon adoption of ASC 606, we are required to allocate our revenues between our performance obligations. Prior to the adoption of ASC 606, the entire management fee was allocated to the policy issuance and renewal services.

Management fee rate

The management fee is calculated by multiplying all direct and affiliated assumed premiums written by the Exchange by the management fee rate, which is determined by our Board of Directors at least annually. The management fee rate was set at 25%, the maximum rate, for 2019, 2018 and 2017. Changes in the management fee rate can affect our revenue and net income significantly. The transaction price for management fee revenue and administrative service reimbursement revenue is allocated based on the estimated standalone selling prices developed using industry information and other available information for similar services. We update the transaction price allocation annually based upon the most recent information available. There was no material change to the allocation in 2019.

The following table presents the allocation and disaggregation of revenue for our two performance obligations:

(dollars in thousands)	Years ended December 31,				
	2019	% Change	2018	% Change	2017
Policy issuance and renewal services					
Direct and affiliated assumed premiums written by the Exchange	\$ 7,486,030	5.2 %	\$ 7,112,846	6.9 %	\$ 6,656,501
Management fee rate	24.2%		24.2%		25.0%
Management fee revenue	1,811,619	5.2	1,721,309	3.4	1,664,125
Change in allowance for management fee returned on cancelled policies ⁽¹⁾	(1,162)	NM	(1,742)	NM	(1,500)
Management fee revenue - policy issuance and renewal services, net ⁽²⁾	<u>\$ 1,810,457</u>	5.3 %	<u>\$ 1,719,567</u>	3.4 %	<u>\$ 1,662,625</u>
Administrative services					
Direct and affiliated assumed premiums written by the Exchange	\$ 7,486,030	5.2 %	\$ 7,112,846	N/A %	\$ —
Management fee rate	0.8%		0.8%		—
Management fee revenue	59,888	5.2	56,903	N/A	—
Change in contract liability ⁽³⁾	(2,633)	17.9	(3,209)	N/A	N/A
Change in allowance for management fee returned on cancelled policies ⁽¹⁾	(51)	17.0	(62)	N/A	N/A
Management fee revenue - administrative services, net	57,204	6.7	53,632	N/A	—
Administrative services reimbursement revenue	582,010	0.3	580,336	N/A	—
Total revenue from administrative services	<u>\$ 639,214</u>	0.8 %	<u>\$ 633,968</u>	N/A %	<u>\$ —</u>

NM = not meaningful

N/A = not applicable

- (1) Management fees are returned to the Exchange when policies are cancelled mid-term and unearned premiums are refunded. We record an estimated allowance for management fees returned on mid-term policy cancellations. This estimated allowance has been allocated between the two performance obligations consistent with the revenue allocation proportion.
- (2) The allocation of management fee revenue between the two performance obligations beginning January 1, 2018 caused the growth in management fee revenue - policy issuance and renewal services to not correspond directly with the growth in direct and affiliated assumed premiums written by the Exchange in 2019 and 2018, compared to 2017.
- (3) Management fee revenue - administrative services is recognized over time as the services are performed. See Part II, Item 8. "Financial Statements - Note 3, Revenue, of Notes to Financial Statements" contained within this report.

Direct and affiliated assumed premiums written by the Exchange

Direct and affiliated assumed premiums include premiums written directly by the Exchange and premiums assumed from its wholly owned property and casualty subsidiaries. Direct and affiliated assumed premiums written by the Exchange increased 5.2% to \$7.5 billion in 2019, from \$7.1 billion in 2018, driven by increases in both policies in force and average premium per policy. Year-over-year policies in force for all lines of business increased 1.8% in 2019 as the result of continuing strong policyholder retention, compared to 3.3% in 2018. The year-over-year average premium per policy for all lines of business increased 3.2% at December 31, 2019, compared to 3.5% at December 31, 2018.

Premiums generated from new business decreased 2.6% to \$863 million in 2019. While year-over-year average premium per policy on new business increased 5.1% at December 31, 2019, new business policies written decreased 7.4% in 2019. Premiums generated from new business increased 4.7% to \$886 million in 2018. While 2018 new business policies written decreased 1.4%, the year-over-year average premium per policy on new business increased 6.2% at December 31, 2018, driving this new business premium increase.

Premiums generated from renewal business increased 6.4% to \$6.6 billion in 2019, compared to 7.2%, or \$6.2 billion, in 2018. Underlying the trend in renewal business premiums were increases in average premium per policy and steady policy retention ratios. The renewal business year-over-year average premium per policy increased 2.9% at December 31, 2019, compared to 3.1% at December 31, 2018.

The Exchange implemented rate increases in 2019, 2018, and 2017 in order to meet loss cost expectations. As the Exchange writes policies with annual terms only, rate actions take 12 months to be fully recognized in written premium and 24 months to be fully recognized in earned premiums. Since rate changes are realized at renewal, it takes 12 months to implement a rate change to all policyholders and another 12 months to earn the increased or decreased premiums in full. As a result, certain rate actions approved in 2018 were reflected in 2019, and recent rate actions in 2019 will be reflected in 2020. The Exchange continuously evaluates pricing and product offerings to meet consumer demands.

Personal lines – Total personal lines premiums written increased 4.9% to \$5.3 billion in 2019, from \$5.0 billion in 2018, driven by an increase of 1.8% in total personal lines policies in force and an increase of 2.9% in the total personal lines year-over-year average premium per policy.

Commercial lines – Total commercial lines premiums written increased 6.1% to \$2.2 billion in 2019, from \$2.1 billion in 2018, driven by a 2.4% increase in total commercial lines policies in force and a 3.6% increase in the total commercial lines year-over-year average premium per policy.

Future trends-premium revenue – The Exchange plans to continue its efforts to grow premiums and improve its competitive position in the marketplace. Expanding the size of its agency force through a careful agency selection process and increased market penetration in our existing operating territories is expected to contribute to future growth as existing and new agents build their books of business.

Changes in premium levels attributable to the growth in policies in force directly affects the profitability of the Exchange and has a direct bearing on our management fee. Our continued focus on underwriting discipline and the maturing of pricing sophistication models has contributed to the Exchange's steady policy retention ratios and increased average premium per policy. The continued growth of its policy base is dependent upon the Exchange's ability to retain existing, and attract new, subscribers/policyholders. A lack of new policy growth or the inability to retain existing customers could have an adverse effect on the Exchange's premium level growth, and consequently our management fee.

Changes in premium levels attributable to rate changes also directly affect the profitability of the Exchange and have a direct bearing on our management fee. Pricing actions contemplated or taken by the Exchange are subject to various regulatory requirements of the states in which it operates. The pricing actions already implemented, or to be implemented, have an effect on the market competitiveness of the Exchange's insurance products. Such pricing actions, and those of the Exchange's competitors, could affect the ability of the Exchange's agents to retain and attract new business. We expect the Exchange's pricing actions to result in a net increase in direct written premium in 2020; however, exposure reductions and/or changes in mix of business as a result of economic conditions could impact the average premium written and affiliated assumed by the Exchange, as customers may reduce coverages.

Policy issuance and renewal services

(dollars in thousands)	Years ended December 31,					
	2019	% Change	2018	% Change	2017	
Management fee revenue - policy issuance and renewal services, net	\$ 1,810,457	5.3 %	\$ 1,719,567	3.4 %	\$ 1,662,625	
Service agreement revenue	27,627	(3.7)	28,677	(1.6)	29,149	
	1,838,084	5.1	1,748,244	3.3	1,691,774	
Cost of policy issuance and renewal services	1,537,949	5.5	1,457,533	4.0	1,401,522	
Operating income - policy issuance and renewal services	\$ 300,135	3.2 %	\$ 290,711	0.2 %	\$ 290,252	

Policy issuance and renewal services

We allocate a portion of the management fee, which currently equates to 24.2% of the direct and affiliated assumed premiums written by the Exchange, for providing policy issuance and renewal services. This portion of the management fee is recognized as revenue when the policy is issued or renewed because it is at that time that the services we provide are substantially complete and the executed insurance policy is transferred to the customer. The increase in management fee revenue for policy issuance and renewal services was driven by the increase in the direct and affiliated assumed premiums written by the Exchange discussed previously.

Service agreement revenue

Service agreement revenue includes service charges we collect from subscribers/policyholders for providing extended payment terms on policies written and affiliated assumed by the Exchange, and late payment and policy reinstatement fees. The service charges are fixed dollar amounts per billed installment. The decrease in service agreement revenue reflects the continued shift to payment plans that do not incur service charges or offer a premium discount for certain payment methods.

Cost of policy issuance and renewal services

(dollars in thousands)	Years ended December 31,					
	2019	% Change	2018	% Change	2017	
<i>Commissions:</i>						
Total commissions	\$ 1,024,654	4.2 %	\$ 983,758	3.8 %	\$ 947,481	
<i>Non-commission expense (1):</i>						
Underwriting and policy processing	\$ 154,934	3.8 %	\$ 149,234	5.8 %	\$ 141,095	
Information technology	167,600	16.0	144,495	3.7	139,303	
Sales and advertising	52,362	(5.8)	55,608	1.7	54,656	
Customer service	32,353	9.9	29,447	13.9	25,858	
Administrative and other	106,046	11.6	94,991	2.0	93,129	
Total non-commission expense	513,295	8.3	473,775	4.3	454,041	
Total cost of policy issuance and renewal services	\$ 1,537,949	5.5 %	\$ 1,457,533	4.0 %	\$ 1,401,522	

(1) 2018 and 2017 amounts have been reclassified between categories to conform to the current period presentation.

Commissions – Commissions increased \$40.9 million in 2019 compared to 2018 and \$36.3 million in 2018 compared to 2017. The increases in both periods resulted from higher direct and affiliated assumed premiums written by the Exchange, somewhat offset by lower agent incentive costs related to less profitable growth.

Non-commission expense – Non-commission expense increased \$39.5 million in 2019 compared to 2018. Underwriting and policy processing costs increased \$5.7 million primarily due to increased underwriting report costs and other policy acquisition costs. Information technology costs increased \$23.1 million primarily due to increased professional fees and hardware and software costs. Sales and advertising costs decreased \$3.2 million due to decreased personnel costs. Customer service costs increased \$2.9 million primarily due to increased credit card processing fees and personnel costs. Administrative and other expenses increased \$11.1 million primarily driven by an increase in the long-term incentive plan costs due to a higher company stock price in 2019 compared to 2018 and several multi-year commitments made to support community development

initiatives. Personnel costs in all expense categories were impacted by increased medical expenses, somewhat offset by lower estimated costs for incentive plans related to sales and underwriting performance in 2019 compared to targets.

In 2018, non-commission expense increased \$19.7 million compared to 2017. Underwriting and policy processing costs increased \$8.1 million primarily due to increased personnel costs and underwriting report costs. Information technology costs increased \$5.2 million primarily due to increased personnel costs and professional fees. Customer service costs increased \$3.6 million primarily due to increased personnel costs and credit card processing fees. Personnel costs in all expense categories were impacted by additional bonuses awarded to all employees as a result of tax savings realized from the lower corporate income tax rate that became effective January 1, 2018 as well as increased medical costs. The total increase in personnel costs was somewhat offset by lower estimated costs for incentive plan awards related to underwriting performance.

Administrative services

(dollars in thousands)	Years ended December 31,				
	2019	% Change	2018	% Change	2017
Management fee revenue - administrative services, net	\$ 57,204	6.7 %	\$ 53,632	N/A %	\$ —
Administrative services reimbursement revenue	582,010	0.3	580,336	N/A	—
Total revenue allocated to administrative services	639,214	0.8	633,968	N/A	—
Administrative services expenses					
Claims handling services	506,491	0.1	505,843	N/A	—
Investment management services	33,640	4.9	32,065	N/A	—
Life management services	41,879	(1.3)	42,428	N/A	—
Operating income - administrative services	\$ 57,204	6.7 %	\$ 53,632	N/A %	\$ —

N/A = not applicable

Administrative services

We allocate a portion of the management fee, which currently equates to 0.8% of the direct and affiliated assumed premiums written by the Exchange, to the administrative services. This portion of the management fee is recognized as revenue over a four-year period representing the time over which the services are provided. We also report reimbursed costs as revenues, which are recognized monthly as services are provided. Beginning with the adoption of ASC 606 on January 1, 2018, the administrative services expenses we incur and the related reimbursements we receive are recorded gross in the Statements of Operations.

Cost of administrative services

By virtue of its legal structure as a reciprocal insurer, the Exchange does not have any employees or officers. Therefore, it enters into contractual relationships by and through an attorney-in-fact. Indemnity serves as the attorney-in-fact on behalf of the Exchange with respect to its administrative services in accordance with the subscriber's agreement. The Exchange's insurance subsidiaries also utilize Indemnity for these services in accordance with the service agreements between each of the subsidiaries and Indemnity. The amounts incurred for these services are reimbursed to Indemnity at cost in accordance with the subscriber's agreement and the service agreements. We record these reimbursements due from the Exchange and its insurance subsidiaries as a receivable.

Total investment income

A summary of the results of our investment operations is as follows for the years ended December 31:

<i>(dollars in thousands)</i>	2019	% Change	2018	% Change	2017
Net investment income	\$ 33,399	10.6 %	\$ 30,209	22.6 %	\$ 24,639
Net realized investment gains (losses)	6,103	NM	(2,010)	NM	1,334
Net impairment losses recognized in earnings	(195)	NM	(1,581)	NM	(182)
Equity in earnings (losses) of limited partnerships	660	NM	(822)	NM	2,801
Total investment income	<u>\$ 39,967</u>	54.9 %	<u>\$ 25,796</u>	(9.8) %	<u>\$ 28,592</u>

NM = not meaningful

Net investment income

Net investment income primarily includes interest and dividends on our fixed maturity and equity security portfolios, net of investment expenses. Net investment income increased by \$3.2 million in 2019, compared to 2018, primarily due to an increase in cash and cash equivalent and agent loan interest income reflecting higher invested balances and rates, somewhat offset by decreased income on fixed maturities due to lower invested balances and yields. Net investment income increased by \$5.6 million in 2018, compared to 2017, primarily due to an increase in cash and cash equivalent income due to an increase in rates, and an increase in bond income due to higher investment yields.

Net realized investment gains (losses)

A breakdown of our net realized investment gains (losses) is as follows for the years ended December 31:

<i>(in thousands)</i>	2019	2018	2017
Securities sold:			
Available-for-sale securities	\$ 4,619	\$ (1,297)	\$ 1,240
Equity securities	(1)	(111)	—
Equity securities change in fair value	1,485	(708)	—
Other	—	106	94
Net realized investment gains (losses)	<u>\$ 6,103</u>	<u>\$ (2,010)</u>	<u>\$ 1,334</u>

Net realized gains of \$6.1 million in 2019 were primarily due to gains from sales of available-for-sale securities and increases in fair value of equity securities. Net realized losses of \$2.0 million in 2018 were due to losses from sales of available-for-sale and equity securities and decreases in fair value of equity securities, while gains of \$1.3 million in 2017 were primarily due to gains from the sales of available-for-sale securities.

Net impairment losses recognized in earnings

Net impairment losses recognized in earnings in all three years included securities in an unrealized loss position that we intended to sell prior to expected recovery of our amortized cost basis as well as securities in an unrealized loss position where we determined the loss was other-than-temporary based on credit factors.

Equity in earnings (losses) of limited partnerships

Equity in earnings of limited partnerships increased by \$1.5 million in 2019, compared to 2018, and decreased by \$3.6 million in 2018, compared to 2017. The increase in earnings in 2019 was primarily the result of higher earnings in real estate investments. The decrease in earnings in 2018 was the result of lower earnings in all sectors.

Financial Condition of Erie Insurance Exchange

Serving in the capacity of attorney-in-fact for the Exchange, we are dependent on the growth and financial condition of the Exchange, who is our sole customer. The strength of the Exchange and its wholly owned subsidiaries is rated annually by A.M. Best Company. Higher ratings of insurance companies generally indicate financial stability and a strong ability to pay claims. The ratings are generally based upon factors relevant to policyholders and are not directed toward return to investors. The Exchange and each of its property and casualty subsidiaries are rated A+ "Superior". On June 24, 2019, the outlook for the financial strength rating was affirmed as stable. According to A.M. Best, this second highest financial strength rating category is assigned to those companies that, in A.M. Best's opinion, have achieved superior overall performance when compared to the standards established by A.M. Best and have a superior ability to meet obligations to policyholders over the long term. Only approximately 12% of insurance groups are rated A+ or higher, and the Exchange is included in that group.

The financial statements of the Exchange are prepared in accordance with statutory accounting principles prescribed by the Commonwealth of Pennsylvania. Financial statements prepared under statutory accounting principles focus on the solvency of the insurer and generally provide a more conservative approach than under U.S. generally accepted accounting principles. Statutory direct written premiums of the Exchange and its wholly owned property and casualty subsidiaries grew 5.2% to \$7.5 billion in 2019 from \$7.1 billion in 2018. These premiums, along with investment income, are the major sources of cash that support the operations of the Exchange. Policyholders' surplus, determined under statutory accounting principles, was \$9.5 billion and \$8.6 billion at December 31, 2019 and 2018, respectively. The Exchange and its wholly owned property and casualty subsidiaries' year-over-year policy retention ratio continues to be high at 90.0% at December 31, 2019 and 90.1% at December 31, 2018.

FINANCIAL CONDITION

Investments

Our investment portfolio is managed with the objective of maximizing after-tax returns on a risk-adjusted basis. The following table presents the carrying value of our investments as of December 31:

(dollars in thousands)

	2019	% to total	2018	% to total
Fixed maturities	\$ 730,701	82%	\$ 748,523	88%
Equity securities:				
Preferred stock	64,752	7	11,853	1
Common stock	2,381	0	—	—
Limited partnerships	26,775	3	34,821	4
Other investments ⁽¹⁾	69,126	8	58,394	7
Total investments	\$ 893,735	100%	\$ 853,591	100%

(1) Other investments primarily include agent loans. Agent loans are included with other assets in the Statements of Financial Position.

We continually review our investment portfolio to evaluate positions that might incur other-than-temporary declines in value. We record impairment write-downs on investments in instances where the fair value of the investment is substantially below cost, and we conclude that the decline in fair value is other-than-temporary, which includes consideration for intent to sell. For all investment holdings, general economic conditions and/or conditions specifically affecting the underlying issuer or its industry, including downgrades by the major rating agencies, are considered in evaluating impairment in value. In addition to specific factors, other factors considered in our review of investment valuation are the length of time and the amount the fair value is below cost.

We individually analyze all positions with emphasis on those that have, in our opinion, declined significantly below cost. In compliance with current impairment guidance for available-for-sale securities, we perform further analysis to determine if a credit-related impairment has occurred. Some of the factors considered in determining whether a security is credit impaired include potential for the default of interest and/or principal, level of subordination, collateral of the issue, compliance with financial covenants, credit ratings and industry conditions. We have the intent to sell all credit-impaired securities; therefore, the entire amount of the impairment charges are included in earnings and no impairments are recorded in other comprehensive income. We believe our investment valuation philosophy and accounting practices result in appropriate and timely measurement of fair value and recognition of other-than-temporary impairment.

Fixed maturities

Under our investment strategy, we maintain a fixed maturity portfolio that is of high quality and well diversified within each market sector. This investment strategy also achieves a balanced maturity schedule. Our fixed maturity portfolio is managed with the goal of achieving reasonable returns while limiting exposure to risk. As part of a rebalancing of our portfolio, we began selling off our municipal bond portfolio in 2018 and completed the process in 2019. The proceeds were reinvested in corporate debt and structured securities as well as preferred stock.

Fixed maturities are carried at fair value with unrealized gains and losses, net of deferred taxes, included in shareholders' equity. Net unrealized gains on fixed maturities, net of deferred taxes, amounted to \$4.5 million at December 31, 2019, compared to net unrealized losses of \$7.0 million at December 31, 2018.

The following table presents a breakdown of the fair value of our fixed maturity portfolio by sector and rating as of December 31, 2019: ⁽¹⁾

(in thousands)

Industry Sector	AAA	AA	A	BBB	Non-investment grade	Fair value
Basic materials	\$ 0	\$ 0	\$ 3,199	\$ 4,241	\$ 7,210	\$ 14,650
Communications	0	5,028	8,396	10,828	19,880	44,132
Consumer	0	3,108	14,415	43,298	34,913	95,734
Diversified	0	0	0	1,059	513	1,572
Energy	0	0	4,573	19,144	9,533	33,250
Financial	0	4,309	50,815	101,178	13,094	169,396
Industrial	0	0	9,276	12,606	15,625	37,507
Structured securities ⁽²⁾	95,659	160,162	15,347	4,653	0	275,821
Technology	0	3,016	8,243	15,586	8,524	35,369
Utilities	0	0	2,732	14,384	6,154	23,270
Total	\$ 95,659	\$ 175,623	\$ 116,996	\$ 226,977	\$ 115,446	\$ 730,701

(1) Ratings are supplied by S&P, Moody's, and Fitch. The table is based upon the lowest rating for each security.

(2) Structured securities include residential mortgage-backed securities, commercial mortgage-backed securities, collateralized debt obligations, and asset-backed securities.

Equity Securities

Equity securities consist of nonredeemable preferred and common stock and are carried at fair value in the Statements of Financial Position with all changes in unrealized gains and losses reflected in the Statements of Operations.

The following table presents an analysis of the fair value of our nonredeemable preferred and common stock securities by sector as of December 31:

(in thousands)

	2019		2018	
	Preferred Stock	Common stock	Preferred Stock	Common stock
Communications	\$ 1,052	\$ 2,381	\$ 0	\$ 0
Consumer	508	0	0	0
Energy	1,881	0	0	0
Financial services	53,513	0	11,853	0
Industrial	980	0	0	0
Utilities	6,818	0	0	0
Total	\$ 64,752	\$ 2,381	\$ 11,853	\$ 0

Shareholders' Equity

Postretirement benefit plans

The funded status of our postretirement benefit plans is recognized in the Statements of Financial Position, with a corresponding adjustment to accumulated other comprehensive income (loss), net of tax. At December 31, 2019, shareholders' equity amounts related to these postretirement plans increased by \$1.7 million, net of tax, of which \$4.9 million represents amortization of the prior service cost and net actuarial loss offset by \$3.2 million of current period actuarial loss. The 2019 actuarial loss was primarily due to the change in the discount rate assumption used to measure the future benefit obligations to 3.59% in 2019, from 4.47% in 2018. At December 31, 2018, shareholders' equity amounts related to these postretirement plans increased by \$35.7 million, net of tax, of which \$10.9 million represents amortization of the prior service cost and net actuarial loss and \$24.8 million represents the current period actuarial gain. The 2018 actuarial gain was primarily due to the change in the discount rate assumption used to measure the future benefit obligations to 4.47% in 2018, from 3.73% in 2017. Although we are the sponsor of these postretirement plans and record the funded status of these plans, the Exchange and its subsidiaries reimburse us for approximately 59% of the annual benefit expense of these plans, which includes pension benefits for employees performing administrative services and their allocated share of costs for employees in departments that support the administrative functions.

Home Office Expansion

In 2016, we entered into a credit agreement for a \$100 million senior secured draw term loan credit facility ("Credit Facility") for the acquisition of real property and construction of an office building that will serve as part of our principal headquarters. On January 1, 2019, the Credit Facility converted to a fully-amortized term loan with monthly payments of principal and interest at a fixed rate of 4.35% over a period of 28 years. We capitalize applicable interest charges incurred during the construction period of long-term building projects as part of the historical cost of the asset.

LIQUIDITY AND CAPITAL RESOURCES

Sources and Uses of Cash

Liquidity is a measure of a company's ability to generate sufficient cash flows to meet the short- and long-term cash requirements of its business operations and growth needs. Our liquidity requirements have been met primarily by funds generated from management fee revenue and income from investments. Cash provided from these sources is used primarily to fund the costs of our management operations including commissions, salaries and wages, pension plans, share repurchases, dividends to shareholders, and the purchase and development of information technology. We expect that our operating cash needs will be met by funds generated from operations.

Volatility in the financial markets presents challenges to us as we do occasionally access our investment portfolio as a source of cash. Some of our fixed income investments, despite being publicly traded, may be illiquid. Volatility in these markets could impair our ability to sell certain of our fixed income securities or cause such securities to sell at deep discounts. We believe we have sufficient liquidity to meet our needs from other sources even if market volatility persists throughout 2020.

Cash flow activities

The following table provides condensed cash flow information for the years ended December 31:

<i>(in thousands)</i>	2019	2018	2017
Net cash provided by operating activities	\$ 364,527	\$ 263,585	\$ 197,126
Net cash used in investing activities	(124,634)	(81,398)	(74,663)
Net cash used in financing activities	(169,571)	(131,491)	(95,814)
Net increase in cash	\$ 70,322	\$ 50,696	\$ 26,649

Net cash provided by operating activities was \$364.5 million in 2019, compared to \$263.6 million in 2018 and \$197.1 million in 2017. Increased cash provided by operating activities in 2019 was primarily due to an increase in management fee revenue received driven by growth in direct and affiliated assumed premiums written by the Exchange compared to 2018, along with no pension contribution in 2019. In 2018, our Board approved an \$80 million accelerated pension contribution which was made in 2018. We are reimbursed approximately 59% of the net periodic benefit cost of the pension plans from the Exchange and its subsidiaries, which includes pension benefits for employees performing administrative services and their allocated share of costs for employees in departments that support the administrative functions. Also, cash paid for agent bonuses decreased \$18.5 million in 2019 compared to 2018 due to less profitable underwriting results. In 2018, increased cash provided by operating activities was primarily due to an increase in management fee revenue received driven by growth in direct and affiliated assumed premiums written by the Exchange along with a decrease in income taxes paid due to the lower corporate income tax rate effective January 1, 2018, compared to 2017.

Net cash used in investing activities totaled \$124.6 million in 2019, compared to \$81.4 million in 2018 and \$74.7 million in 2017. In 2019, we generated more proceeds from investment activity, which were offset by higher purchases of available-for-sale securities and equity securities due to portfolio rebalancing. Fixed asset purchases also increased primarily related to the home office expansion. We have a commitment for the remaining costs related to the construction of the building that will serve as part of our principal headquarters. Of the total expected cost of \$113 million, which was funded primarily by the senior secured draw term loan credit facility, \$88.9 million of costs have been paid as of December 31, 2019. The increase in cash used in 2018, compared to 2017, was driven by increased agent loans and fixed asset purchases primarily related to the home office expansion. These increases were somewhat offset by more proceeds generated from investment activity and EFL's repayment of the \$25 million surplus note.

Net cash used in financing activities totaled \$169.6 million in 2019, compared to \$131.5 million in 2018 and \$95.8 million in 2017. The increase in cash used in 2019, compared to 2018, was due to an increase in dividends paid to shareholders and principal payments on the senior secured draw term loan credit facility, which commenced January 1, 2019. Future financing activities will include annual principal payments, of which \$2.0 million will be paid in 2020. The increase in cash used in 2018, compared to 2017, was primarily due to the lower scheduled draws on the senior secured draw term loan credit facility along with an increase in dividends paid to shareholders.

No shares of our Class A nonvoting common stock were repurchased in 2019, 2018 and 2017 in conjunction with our stock repurchase program. In 2011, our Board of Directors approved a continuation of the current stock repurchase program for a total of \$150 million with no time limitation. This repurchase authority includes, and is not in addition to, any unspent amounts remaining under the prior authorization. We had approximately \$17.8 million of repurchase authority remaining under this program at December 31, 2019, based upon trade date.

In 2019, 2018 and 2017, we purchased shares of our outstanding Class A nonvoting common stock outside of our publicly announced share repurchase program for certain stock-based incentive plans. We purchased 15,003 shares for \$2.6 million in 2019 and 27,120 shares for \$3.2 million in 2018 for our equity compensation plan and to fund the rabbi trust for the outside director deferred stock compensation plan and the incentive compensation deferral plan. In 2017, we purchased 60,332 shares for \$7.3 million for our long-term incentive plan, to fund the rabbi trust for the outside director deferred stock compensation plan, and for our equity compensation plan. All shares were delivered in the year they were purchased.

Capital Outlook

We regularly prepare forecasts evaluating the current and future cash requirements for both normal and extreme risk events. Should an extreme risk event result in a cash requirement exceeding normal cash flows, we have the ability to meet our future funding requirements through various alternatives available to us.

Outside of our normal operating and investing cash activities, future funding requirements could be met through: 1) cash and cash equivalents, which total approximately \$336.7 million at December 31, 2019, 2) a \$100 million bank revolving line of credit, and 3) liquidation of unpledged assets held in our investment portfolio, including preferred and common stock and investment grade bonds which totaled approximately \$465.2 million at December 31, 2019. Volatility in the financial markets could impair our ability to sell certain fixed income securities or cause such securities to sell at deep discounts. Additionally, we have the ability to curtail or modify discretionary cash outlays such as those related to shareholder dividends and share repurchase activities.

As of December 31, 2019, we have access to a \$100 million bank revolving line of credit with a \$25 million letter of credit sublimit that expires on October 30, 2023. As of December 31, 2019, a total of \$99.1 million remains available under the facility due to \$0.9 million outstanding letters of credit, which reduce the availability for letters of credit to \$24.1 million. We had no borrowings outstanding on our line of credit as of December 31, 2019. Investments with a fair value of \$110.1 million were pledged as collateral on the line at December 31, 2019. These securities have no trading restrictions and are reported as available-for-sale securities and cash and cash equivalents in the Statements of Financial Position. The bank requires compliance with certain covenants, which include leverage ratios and debt restrictions. We were in compliance with our bank covenants at December 31, 2019.

Contractual Obligations

We have certain obligations and commitments to make future payments under various contracts. As of December 31, 2019, the aggregate obligations were as follows:

(in thousands)	Payments due by period				
	Total	2020	2021-2022	2023-2024	2025 and thereafter
Long-term debt ⁽¹⁾	\$ 166,832	\$ 6,183	\$ 12,366	\$ 12,366	\$ 135,917
Home office expansion ⁽²⁾	38,881	29,414	9,467	0	0
Operating leases ⁽³⁾	22,498	11,832	10,309	357	0
Other commitments ⁽⁴⁾	349,850	203,753	130,492	12,489	3,116
Gross contractual obligations ⁽⁵⁾	578,061	251,182	162,634	25,212	139,033
Estimated reimbursements from affiliates ⁽⁶⁾	127,224	70,030	48,750	6,632	1,812
Net contractual obligations	\$ 450,837	\$ 181,152	\$ 113,884	\$ 18,580	\$ 137,221

- (1) Long-term debt amount differs from the balance presented on the Statements of Financial Position as the amount in the table above includes interest and principal payments.
- (2) We agreed to the guaranteed maximum price terms of an agreement with our construction manager for the construction of the office building that will serve as part of our principal headquarters. Substantial completion of the project is expected in 2020. This project is primarily being funded by the senior secured draw term loan credit facility included in long-term debt in the table above. Included in these amounts are obligations for furniture and fixtures and information technology costs for the office building.
- (3) Operating leases represent the total commitment for the lease components of our operating lease agreements. Non-lease component commitments related to these contracts are included in other commitments. See Part II, Item 8. "Financial Statements and Supplementary Data - Note 2, Significant Accounting Policies and Note 8, Leases, of Notes to Financial Statements" contained within this report.
- (4) Other commitments include various agreements for services, including information technology, support, and maintenance obligations, and other obligations in the ordinary course of business. These agreements are enforceable and legally binding and specify fixed or minimum quantities to be purchased and the approximate timing of the transaction. The table above also includes agreements that contain cancellation provisions, some of which may require us to pay a termination fee. The amounts under such contracts are included in the table above as we expect to make future cash payments according to the contract terms.
- (5) The obligation for our unfunded Supplemental Employee Retirement Plan (SERP) for our executive and senior management is not included in gross contractual obligations. The accumulated benefit obligation for this plan at December 31, 2019 is \$23.4 million. We expect to have sufficient cash flows from operations to meet the future benefit payments as these become due.
- (6) We are reimbursed from the Exchange and its subsidiaries for a portion of the costs related to other commitments and operating leases.

Our funding policy for our defined benefit pension plan is generally to contribute an amount equal to the greater of the target normal cost for the plan year, or the amount necessary to fund the plan to 100%. Historically, this has resulted in an annual pension contribution. In 2018, however, we made accelerated pension contributions totaling \$80 million. Following our 2018 contribution, we would not expect to make a subsequent contribution until the sum of the target normal costs for plan years beginning on and after December 31, 2017 exceeds \$80 million, or earlier if a contribution is necessary to fund the plan to 100%.

Off-Balance Sheet Arrangements

Off-balance sheet arrangements include those with unconsolidated entities that may have a material current or future effect on our financial condition or results of operations, including material variable interests in unconsolidated entities that conduct certain activities. We have no material off-balance sheet obligations.

Enterprise Risk Management

The role of our Enterprise Risk Management ("ERM") function is to ensure that all significant risks are clearly identified, understood, proactively managed and consistently monitored to achieve strategic objectives for all stakeholders. Our ERM program views risk holistically across our entire group of companies. It ensures implementation of risk responses to mitigate potential impacts. See Item 1A "Risk Factors" contained in this report for a list of risk factors.

Our ERM process is founded on a governance framework that includes oversight at multiple levels of our organization, including our Board of Directors and executive management. Accountability to identify, manage, and mitigate risk is embedded within all functions and areas of our business. We have defined risk tolerances to monitor and manage significant risks within acceptable levels. In addition to identifying, evaluating, prioritizing, monitoring, and mitigating significant risks, our ERM process includes extreme event analyses and scenario testing. Given our defined tolerance for risk, risk model output is used to quantify the potential variability of future performance and the sufficiency of capital and liquidity levels.

TRANSACTIONS/AGREEMENTS WITH RELATED PARTIES**Board Oversight**

Our Board of Directors has a broad oversight responsibility over our intercompany relationships with the Exchange. As a consequence, our Board of Directors may be required to make decisions or take actions that may not be solely in the interest of our shareholders, such as setting the management fee rate paid by the Exchange to us and ratifying any other significant intercompany activity.

Insurance holding company system

Most states have enacted legislation that regulates insurance holding company systems, defined as two or more affiliated persons, one or more of which is an insurer. The Exchange has the following wholly owned property and casualty subsidiaries: Erie Insurance Company, Erie Insurance Company of New York, Erie Insurance Property & Casualty Company and Flagship City Insurance Company, and a wholly owned life insurance company, Erie Family Life Insurance Company. Indemnity and the Exchange, and its wholly owned subsidiaries, meet the definition of an insurance holding company system.

All transactions within a holding company system affecting the member insurers of the holding company system must be fair and reasonable and any charges or fees for services performed must be reasonable. Approval by the applicable insurance commissioner is required prior to the consummation of transactions affecting the members within a holding company system.

Intercompany AgreementsSubscriber's and services agreements

We serve as attorney-in-fact for the subscribers at the Exchange, a reciprocal insurance exchange. Each applicant for insurance to a reciprocal insurance exchange signs a subscriber's agreement that contains an appointment of an attorney-in-fact. Through the designation of attorney-in-fact, we are required to provide policy issuance and renewal services and act as the attorney-in-fact for the Exchange with respect to all administrative services, as discussed previously. Pursuant to the subscriber's agreement, we earn a management fee for these services calculated as a percentage of the direct and affiliated assumed premiums written by the Exchange. By virtue of its legal structure as a reciprocal insurer, the Exchange does not have any employees or officers. Therefore, it enters into contractual relationships by and through the attorney-in-fact. The Exchange's insurance subsidiaries also utilize Indemnity for all administrative services in accordance with the service agreements between each of the subsidiaries and Indemnity. The amounts incurred for all administrative services are reimbursed to Indemnity at cost in accordance with the subscriber's agreement and the service agreements. These reimbursements are settled on a monthly basis. State insurance regulations require that intercompany service agreements and any material amendments be approved in advance by the state insurance department.

Leased property

We lease the home office from the Exchange. Rent is based on rental rates of like property in Erie, Pennsylvania and all operating expenses including utilities, cleaning, repairs, real estate taxes, and property insurance are the responsibility of the tenant (Indemnity). Rental costs of shared facilities are allocated based upon usage or square footage occupied. We also had a lease commitment with EFL for a field office until 2018.

We previously owned three field offices for which rental costs of shared facilities were allocated based upon usage or square footage occupied. In 2018, we sold the three field offices to the Exchange at the current independent appraised value in order to align the ownership interest of these facilities with the functions being performed at these locations, which are claims-related activities.

Cost Allocation

The allocation of costs affects our financial condition and that of the Exchange and its wholly owned subsidiaries. Management's role is to determine that allocations are consistently made in accordance with the subscriber's agreement with the subscribers at the Exchange, intercompany service agreements, and applicable insurance laws and regulations. Allocation of costs under these various agreements requires judgment and interpretation, and such allocations are performed using a consistent methodology, which is intended to adhere to the terms and intentions of the underlying agreements.

Intercompany Receivables

We have significant receivables from the Exchange and its affiliates that result in a concentration of credit risk. Receivables from the Exchange and other affiliates were \$468.6 million, or 23.2% of total assets, at December 31, 2019 and \$449.9 million, or 25.3% of total assets, at December 31, 2018. These receivables include management fees due for policy issuance and renewal services performed by us under the subscriber's agreement, and certain costs we incur acting as the attorney-in-fact on behalf of the Exchange as well as the service provider for its insurance subsidiaries with respect to all administrative services, as discussed previously. These receivables from the Exchange and its affiliates are settled monthly. We continually monitor the

financial strength of the Exchange. Given the financial strength of the Exchange and historical experience of no credit losses, we believe it is unlikely these receivables would have a significant credit loss exposure.

Surplus Note

We previously held a \$25 million surplus note issued to us by EFL that was payable on demand on or after December 31, 2018. In 2018, EFL, with the appropriate approval from the Pennsylvania Insurance Commissioner, satisfied its obligation and repaid the surplus note. EFL paid related interest to us of \$1.6 million in 2018 and \$1.7 million in 2017.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market Risk

Market risk is the risk of loss arising from adverse changes in interest rates, credit spreads, equity prices, or foreign exchange rates, as well as other relevant market rate or price changes. The volatility and liquidity in the markets in which the underlying assets are traded directly influence market risk. The following is a discussion of our primary risk exposures, including interest rate risk, investment credit risk, concentration risk, liquidity risk, and equity price risk, and how those exposures are currently managed as of December 31, 2019.

Interest Rate Risk

We invest primarily in fixed maturity investments, which comprised 82% of our invested assets at December 31, 2019. The value of the fixed maturity portfolio is subject to interest rate risk. As market interest rates decrease, the value of the portfolio increases with the opposite holding true in rising interest rate environments. We do not hedge our exposure to interest rate risk. A common measure of the interest sensitivity of fixed maturity assets is effective duration, a calculation that utilizes maturity, coupon rate, yield, and call terms to calculate an expected change in fair value given a change in interest rates. The longer the duration, the more sensitive the asset is to market interest rate fluctuations. Duration is analyzed quarterly to ensure that it remains in the targeted range.

A sensitivity analysis is used to measure the potential loss in future earnings, fair values, or cash flows of interest-sensitive instruments resulting from one or more selected hypothetical changes in interest rates and other market rates or prices over a selected period. The following pro forma information is presented assuming a 100-basis point parallel increase in interest rates across the yield curve at December 31 of each year and reflects the estimated effect on the fair value of our fixed maturity portfolio.

Fixed maturities interest-rate sensitivity analysis

(dollars in thousands)

	At December 31,	
	2019	2018
Fair value of fixed maturity portfolio	\$ 730,701	\$ 748,523
Fair value assuming 100-basis point rise in interest rates	\$ 710,534	\$ 735,806
Effective duration (as a percentage) ⁽¹⁾	2.8	1.6

(1) Effective duration at December 31, 2019 reflects the increase in corporate debt and structured securities and reduction in municipal bonds and short-term U.S. Treasuries as a result of a portfolio rebalancing.

While the fixed maturity portfolio is sensitive to interest rates, the future principal cash flows that will be received by contractual maturity date are presented below at December 31, 2019 and 2018. Actual cash flows may differ from those stated as a result of calls, prepayments, or defaults.

Contractual repayments of principal by maturity date

(in thousands)

Fixed maturities:	December 31, 2019
2020	\$ 32,473
2021	26,652
2022	60,120
2023	103,345
2024	139,005
Thereafter	349,145
Total	\$ 710,740
Fair value	\$ 730,701

(in thousands)

Fixed maturities:	December 31, 2018
2019	\$ 265,006
2020	55,808
2021	46,647
2022	19,911
2023	37,645
Thereafter	317,446
Total	\$ 742,463
Fair value	\$ 748,523

Investment Credit Risk

Our objective is to earn competitive returns by investing in a diversified portfolio of securities. Our portfolios of fixed maturity securities, nonredeemable preferred stock and, to a lesser extent, short-term investments are subject to credit risk. This risk is defined as the potential loss in fair value resulting from adverse changes in the borrower's ability to repay the debt. We manage this risk by performing upfront underwriting analysis and ongoing reviews of credit quality by position and for the portfolio in total. We do not hedge the credit risk inherent in our fixed maturity and nonredeemable preferred stock investments.

Generally, the fixed maturities in our portfolio are rated by external rating agencies. If not externally rated, we rate them internally on a basis consistent with that used by the rating agencies. We classify all fixed maturities as available-for-sale securities, allowing us to meet our liquidity needs and provide greater flexibility to appropriately respond to changes in market conditions.

The following tables show our fixed maturity investments by rating⁽¹⁾:

	At December 31, 2019		
(dollars in thousands)	Amortized cost	Fair value	Percent of total
AAA, AA, A	\$ 386,046	\$ 388,278	53%
BBB	224,373	226,977	31
Total investment grade	610,419	615,255	84
BB	49,866	51,177	7
B	53,782	54,310	8
CCC, CC, C, and below	10,883	9,959	1
Total non-investment grade	114,531	115,446	16
Total	\$ 724,950	\$ 730,701	100%

(dollars in thousands)	At December 31, 2018		
	Amortized cost	Fair value	Percent of total
AAA, AA, A	\$ 524,560	\$ 524,860	70%
BBB	73,378	72,377	10
Total investment grade	597,938	597,237	80
BB	51,733	49,480	6
B	94,122	89,229	12
CCC, CC, C, and below	13,602	12,577	2
Total non-investment grade	159,457	151,286	20
Total	\$ 757,395	\$ 748,523	100%

(1) Ratings are supplied by S&P, Moody's, and Fitch. The table is based upon the lowest rating for each security.

We are also exposed to a concentration of credit risk with the Exchange. See the "Transactions/Agreements with Related Parties, Intercompany Receivables" section of Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained within this report for further discussion of this risk.

Concentration Risk

While our portfolio is well diversified within each market sector, there is an inherent risk of concentration in a particular industry or sector. We continually monitor our level of exposure to individual issuers as well as our allocation to each industry and market sector against internally established policies. See the "Financial Condition" section of Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained within this report for details of investment holdings by sector.

Liquidity Risk

Periods of volatility in the financial markets can create conditions where fixed maturity investments, despite being publicly traded, can become illiquid. However, we actively manage the maturity profile of our fixed maturity portfolio such that scheduled repayments of principal occur on a regular basis.

Equity Price Risk

Our portfolio of equity securities, which primarily includes nonredeemable preferred stock, are carried on the Statements of Financial Position at estimated fair value. Equity securities are exposed to the risk of potential loss in estimated fair value resulting from an adverse change in prices ("price risk"). We do not hedge our exposure to price risk inherent in our equity investments.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**Report of Independent Registered Public Accounting Firm**

To the Board of Directors and Shareholders of Erie Indemnity Company

Opinion on the Financial Statements

We have audited the accompanying statements of financial position of Erie Indemnity Company (the "Company") as of December 31, 2019 and 2018, the related statements of operations, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 27, 2020 expressed an unqualified opinion thereon.

Adoption of New Accounting Standard

As discussed in Note 3 to the financial statements, the Company changed its method of accounting for revenue in 2018 due to the adoption of ASU No. 2014-09, *"Revenue from Contracts with Customers"*.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Proportional Cost Allocation***Description of the Matter***

For the year ended December 31, 2019, the Company's administrative services reimbursement revenue totaled \$582 million. The Company's primary function, as attorney-in-fact, is to perform certain services on behalf of the subscribers at the Erie Insurance Exchange (Exchange) and its insurance subsidiaries, in accordance with the Subscriber's Agreement and the service agreements with each of the Exchange's insurance subsidiaries. As explained in Note 2 of the financial statements, pursuant to approved service agreements, administrative services, which include costs associated with claims handling services, life insurance related operating activities, investment management, and operating overhead incurred by the Company on behalf of the Exchange and its insurance subsidiaries, are reimbursed to the Company at cost and recorded as administrative services reimbursement revenue. To determine the proportional cost allocation to each entity, the Company determines utilization statistics using numerous variables including, among others, employee count, square footage, vehicle count, and project hours.

Auditing management's proportional cost allocations was complex due to the number of costs that are included in the allocations and the judgment applied in determining the utilization statistics used to determine the proportional allocations to each entity.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's proportional cost allocations process. This included, among others, testing management's review controls over the determination of the utilization statistics and ultimate allocation of costs to the Exchange and its insurance subsidiaries.

To test the Company's proportional cost allocations, our procedures included, among others, evaluating that the costs included in the allocations are in accordance with the Subscriber's Agreement and the service agreements with each of the Exchange's insurance subsidiaries. We tested the completeness and accuracy of the costs subjected to allocation through testing of the reconciliation of the costs recorded in the source systems to the costs that are allocated. We evaluated the allocation of costs to the Exchange and its insurance subsidiaries with the costs allocated in prior periods.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2003.

Cleveland, OH
February 27, 2020

ERIE INDEMNITY COMPANY
STATEMENTS OF OPERATIONS
Years ended December 31, 2019, 2018 and 2017
(dollars in thousands, except per share data)

	2019	2018	2017
Operating revenue			
Management fee revenue - policy issuance and renewal services, net	\$ 1,810,457	\$ 1,719,567	\$ 1,662,625
Management fee revenue - administrative services, net	57,204	53,632	—
Administrative services reimbursement revenue	582,010	580,336	—
Service agreement revenue	27,627	28,677	29,149
Total operating revenue	2,477,298	2,382,212	1,691,774
Operating expenses			
Cost of operations - policy issuance and renewal services	1,537,949	1,457,533	1,401,522
Cost of operations - administrative services	582,010	580,336	—
Total operating expenses	2,119,959	2,037,869	1,401,522
Operating income	357,339	344,343	290,252
Investment income			
Net investment income	33,399	30,209	24,639
Net realized investment gains (losses)	6,103	(2,010)	1,334
Net impairment losses recognized in earnings	(195)	(1,581)	(182)
Equity in earnings (losses) of limited partnerships	660	(822)	2,801
Total investment income	39,967	25,796	28,592
Interest expense, net	856	2,460	1,238
Other income (expense)	255	3,641	(1,911)
Income before income taxes	396,705	371,320	315,695
Income tax expense	79,884	83,096	118,696
Net income	\$ 316,821	\$ 288,224	\$ 196,999
Earnings Per Share			
Net income per share			
Class A common stock – basic	\$ 6.80	\$ 6.19	\$ 4.23
Class A common stock – diluted	\$ 6.06	\$ 5.51	\$ 3.76
Class B common stock – basic	\$ 1,020	\$ 928	\$ 635
Class B common stock – diluted	\$ 1,020	\$ 928	\$ 634
Weighted average shares outstanding – Basic			
Class A common stock	46,188,836	46,188,637	46,186,831
Class B common stock	2,542	2,542	2,542
Weighted average shares outstanding – Diluted			
Class A common stock	52,319,860	52,315,213	52,337,463
Class B common stock	2,542	2,542	2,542

See accompanying notes to Financial Statements. See Note 14, "Accumulated Other Comprehensive Income (Loss)", for amounts reclassified out of accumulated other comprehensive income (loss) into the Statements of Operations.

ERIE INDEMNITY COMPANY
STATEMENTS OF COMPREHENSIVE INCOME
Years ended December 31, 2019, 2018 and 2017
(in thousands)

	2019	2018	2017
Net income	\$ 316,821	\$ 288,224	\$ 196,999
Other comprehensive income (loss), net of tax			
Change in unrealized holding gains (losses) on available-for-sale securities	11,718	(9,937)	(190)
Pension and other postretirement plans	1,698	35,712	(8,105)
Total other comprehensive income (loss), net of tax	13,416	25,775	(8,295)
Comprehensive income	<u>\$ 330,237</u>	<u>\$ 313,999</u>	<u>\$ 188,704</u>

See accompanying notes to Financial Statements. See Note 14, "Accumulated Other Comprehensive Income (Loss)", for amounts reclassified out of accumulated other comprehensive income (loss) into the Statements of Operations.

ERIE INDEMNITY COMPANY
STATEMENTS OF FINANCIAL POSITION
At December 31, 2019 and 2018
(dollars in thousands, except per share data)

	2019	2018
Assets		
Current assets:		
Cash and cash equivalents	\$ 336,739	\$ 266,417
Available-for-sale securities	32,810	402,339
Equity securities	2,381	—
Receivables from Erie Insurance Exchange and affiliates	468,636	449,873
Prepaid expenses and other current assets	44,943	36,892
Federal income taxes recoverable	462	8,162
Accrued investment income	5,433	5,263
Total current assets	891,404	1,168,946
Available-for-sale securities	697,891	346,184
Equity securities	64,752	11,853
Limited partnership investments	26,775	34,821
Fixed assets, net	221,379	130,832
Deferred income taxes, net	17,186	24,101
Other assets	96,853	61,590
Total assets	\$ 2,016,240	\$ 1,778,327
Liabilities and shareholders' equity		
Current liabilities:		
Commissions payable	\$ 262,963	\$ 241,573
Agent bonuses	96,053	103,462
Accounts payable and accrued liabilities	134,957	111,291
Dividends payable	44,940	41,910
Contract liability	35,938	33,854
Deferred executive compensation	10,882	13,107
Current portion of long-term borrowings	1,979	1,870
Total current liabilities	587,712	547,067
Defined benefit pension plans	145,659	116,866
Contract liability	18,435	17,873
Deferred executive compensation	13,734	13,075
Long-term borrowings	95,842	97,860
Other long-term liabilities	21,605	11,914
Total liabilities	882,987	804,655
Shareholders' equity		
Class A common stock, stated value \$0.0292 per share; 74,996,930 shares authorized; 68,299,200 shares issued; 46,189,068 shares outstanding	1,992	1,992
Class B common stock, convertible at a rate of 2,400 Class A shares for one Class B share, stated value \$70 per share; 3,070 shares authorized; 2,542 shares issued and outstanding	178	178
Additional paid-in-capital	16,483	16,459
Accumulated other comprehensive loss	(116,868)	(130,284)
Retained earnings	2,377,558	2,231,417
Total contributed capital and retained earnings	2,279,343	2,119,762
Treasury stock, at cost; 22,110,132 shares held	(1,158,910)	(1,157,625)
Deferred compensation	12,820	11,535
Total shareholders' equity	1,133,253	973,672
Total liabilities and shareholders' equity	\$ 2,016,240	\$ 1,778,327

See accompanying notes to Financial Statements.

ERIE INDEMNITY COMPANY
STATEMENTS OF SHAREHOLDERS' EQUITY
Years ended December 31, 2019, 2018 and 2017
(dollars in thousands, except per share data)

	Class A common stock	Class B common stock	Additional paid-in-capital	Accumulated other comprehensive income (loss)	Retained earnings	Treasury stock	Deferred compensation	Total shareholders' equity
Balance, December 31, 2016	\$ 1,992	\$ 178	\$ 16,300	\$ (121,381)	\$ 2,065,911	\$ (1,155,846)	\$ 9,756	\$ 816,910
Net income					196,999			196,999
Other comprehensive loss				(8,295)				(8,295)
Dividends declared:								
Class A \$3.1875 per share					(147,225)			(147,225)
Class B \$478.125 per share					(1,215)			(1,215)
Net purchase of treasury stock ⁽¹⁾			170			0		170
Deferred compensation						(1,177)	1,177	0
Rabbi trust distribution ⁽²⁾						1,355	(1,355)	0
AOCI reclassification ⁽³⁾				(26,383)	26,383			0
Balance, December 31, 2017	\$ 1,992	\$ 178	\$ 16,470	\$ (156,059)	\$ 2,140,853	\$ (1,155,668)	\$ 9,578	\$ 857,344
Cumulative effect adjustments ⁽⁴⁾					(38,392)			(38,392)
Net income					288,224			288,224
Other comprehensive income				25,775				25,775
Dividends declared:								
Class A \$3.42 per share					(157,964)			(157,964)
Class B \$513.00 per share					(1,304)			(1,304)
Net purchase of treasury stock ⁽¹⁾			(11)			0		(11)
Deferred compensation						(2,566)	2,566	0
Rabbi trust distribution ⁽²⁾						609	(609)	0
Balance, December 31, 2018	\$ 1,992	\$ 178	\$ 16,459	\$ (130,284)	\$ 2,231,417	\$ (1,157,625)	\$ 11,535	\$ 973,672
Net income					316,821			316,821
Other comprehensive income				13,416				13,416
Dividends declared:								
Class A \$3.665 per share					(169,283)			(169,283)
Class B \$549.75 per share					(1,397)			(1,397)
Net purchase of treasury stock ⁽¹⁾			24			0		24
Deferred compensation						(2,208)	2,208	0
Rabbi trust distribution ⁽²⁾						923	(923)	0
Balance, December 31, 2019	\$ 1,992	\$ 178	\$ 16,483	\$ (116,868)	\$ 2,377,558	\$ (1,158,910)	\$ 12,820	\$ 1,133,253

(1) Net purchases of treasury stock in 2017, 2018 and 2019 includes the repurchase of our Class A common stock in the open market that were subsequently distributed to satisfy stock based compensation awards. See Note 11, "Incentive and Deferred Compensation Plans".

(2) Distributions of our Class A shares were made from the rabbi trust to a retired director and an incentive compensation deferral plan participant in both 2019 and 2018 and to a retired director in 2017. See Note 11, "Incentive and Deferred Compensation Plans".

(3) A one-time adjustment was made in 2017 to reclassify stranded tax effects of the components of accumulated other comprehensive income ("AOCI") (loss) resulting from enactment of Tax Cuts and Jobs Act ("TCJA") from AOCI (loss) to retained earnings. See Note 2, "Significant Accounting Policies".

(4) Cumulative effect adjustments are primarily related to the implementation of new revenue recognition guidance effective January 1, 2018. See Note 2, "Significant Accounting Policies".

See accompanying notes to Financial Statements.

ERIE INDEMNITY COMPANY
STATEMENTS OF CASH FLOWS
Years ended December 31, 2019, 2018 and 2017
(in thousands)

	2019	2018	2017
Cash flows from operating activities			
Management fee received	\$ 1,845,075	\$ 1,751,247	\$ 1,627,558
Administrative services reimbursements received	588,255	574,698	—
Service agreement fee received	27,627	28,677	29,149
Net investment income received	34,511	37,489	31,281
Limited partnership distributions	1,931	7,173	5,128
Decrease in reimbursements collected from affiliates	—	—	(4,720)
Commissions paid to agents	(895,563)	(853,758)	(800,627)
Agents bonuses paid	(115,795)	(134,314)	(122,743)
Salaries and wages paid	(186,460)	(182,537)	(171,547)
Pension contributions and employee benefits paid	(42,728)	(115,525)	(89,981)
General operating expenses paid	(236,128)	(208,036)	(199,084)
Administrative services expenses paid	(582,528)	(580,338)	—
Income taxes paid	(72,817)	(58,814)	(106,250)
Interest paid	(853)	(2,377)	(1,038)
Net cash provided by operating activities	364,527	263,585	197,126
Cash flows from investing activities			
Purchase of investments:			
Available-for-sale securities	(956,818)	(392,895)	(391,181)
Equity securities	(66,760)	(4,087)	—
Limited partnerships	(48)	(243)	(410)
Other investments	(1,032)	—	—
Proceeds from investments:			
Available-for-sale securities sales	687,347	235,323	144,317
Available-for-sale securities maturities/calls	303,798	134,396	194,980
Equity securities	16,109	4,162	—
Limited partnerships	3,722	3,387	10,768
Purchase of fixed assets	(102,039)	(56,297)	(28,927)
Proceeds from disposal of fixed assets	777	6,014	0
Loans to agents	(17,611)	(42,594)	(9,153)
Collections on agent loans	7,921	6,436	4,943
Repayment of note receivable from Erie Family Life Insurance	—	25,000	—
Net cash used in investing activities	(124,634)	(81,398)	(74,663)
Cash flows from financing activities			
Dividends paid to shareholders	(167,651)	(156,474)	(145,765)
Net (payments) proceeds from long-term borrowings	(1,920)	24,983	49,951
Net cash used in financing activities	(169,571)	(131,491)	(95,814)
Net increase in cash and cash equivalents	70,322	50,696	26,649
Cash and cash equivalents, beginning of year	266,417	215,721	189,072
Cash and cash equivalents, end of year	\$ 336,739	\$ 266,417	\$ 215,721
Supplemental disclosure of noncash transactions			
Transfer of investments from limited partnerships to equity securities	\$ 3,310	\$ —	\$ —
Liability incurred to purchase fixed assets	\$ 6,800	\$ 8,453	\$ —
Operating lease assets obtained in exchange for new operating lease liabilities	\$ 35,483	\$ —	\$ —

See accompanying notes to Financial Statements. See Note 18, "Supplementary Data on Cash Flows", for additional supplemental cash flow information.

ERIE INDEMNITY COMPANY
NOTES TO FINANCIAL STATEMENTS

Note 1. Nature of Operations

Erie Indemnity Company ("Indemnity", "we", "us", "our") is a publicly held Pennsylvania business corporation that has since its incorporation in 1925 served as the attorney-in-fact for the subscribers (policyholders) at the Erie Insurance Exchange ("Exchange"). The Exchange, which also commenced business in 1925, is a Pennsylvania-domiciled reciprocal insurer that writes property and casualty insurance.

Our primary function as attorney-in-fact is to perform policy issuance and renewal services on behalf of the subscribers at the Exchange. We also act as attorney-in-fact on behalf of the Exchange with respect to all claims handling and investment management services, as well as the service provider for all claims handling, life insurance, and investment management services for its insurance subsidiaries, collectively referred to as "administrative services". Acting as attorney-in-fact in these two capacities is done in accordance with a subscriber's agreement (a limited power of attorney) executed individually by each subscriber (policyholder), which appoints us as their common attorney-in-fact to transact certain business on their behalf. Pursuant to the subscriber's agreement for acting as attorney-in-fact in these two capacities, we earn a management fee calculated as a percentage of the direct and affiliated assumed premiums written by the Exchange.

The policy issuance and renewal services we provide to the Exchange are related to the sales, underwriting and issuance of policies. The sales related services we provide include agent compensation and certain sales and advertising support services. Agent compensation includes scheduled commissions to agents based upon premiums written as well as additional commissions and bonuses to agents, which are earned by achieving targeted measures. Agent compensation comprised approximately 67% of our 2019 policy issuance and renewal expenses. The underwriting services we provide include underwriting and policy processing and comprised approximately 10% of our 2019 policy issuance and renewal expenses. The remaining services we provide include customer service and administrative support. We also provide information technology services that support all the functions listed above that comprised approximately 11% of our 2019 policy issuance and renewal expenses. Included in these expenses are allocations of costs for departments that support these policy issuance and renewal functions.

By virtue of its legal structure as a reciprocal insurer, the Exchange does not have any employees or officers. Therefore, it enters into contractual relationships by and through an attorney-in-fact. Indemnity serves as the attorney-in-fact on behalf of the Exchange with respect to its administrative services. The Exchange's insurance subsidiaries also utilize Indemnity for these services in accordance with the service agreements between each of the subsidiaries and Indemnity. Claims handling services include costs incurred in the claims process, including the adjustment, investigation, defense, recording and payment functions. Life insurance management services include costs incurred in the management and processing of life insurance business. Investment management services are related to investment trading activity, accounting and all other functions attributable to the investment of funds. Included in these expenses are allocations of costs for departments that support these administrative functions. The amounts incurred for these services are reimbursed to Indemnity at cost in accordance with the subscriber's agreement and the service agreements. State insurance regulations require that intercompany service agreements and any material amendments be approved in advance by the state insurance department.

Our results of operations are tied to the growth and financial condition of the Exchange. If any events occurred that impaired the Exchange's ability to grow or sustain its financial condition, including but not limited to reduced financial strength ratings, disruption in the independent agency relationships, significant catastrophe losses, or products not meeting customer demands, the Exchange could find it more difficult to retain its existing business and attract new business. A decline in the business of the Exchange almost certainly would have as a consequence a decline in the total premiums paid and a correspondingly adverse effect on the amount of the management fees we receive. We also have an exposure to a concentration of credit risk related to the unsecured receivables due from the Exchange for its management fee and cost reimbursements. See Note 16, "Concentrations of Credit Risk".

Note 2. Significant Accounting PoliciesBasis of presentation

The accompanying financial statements have been prepared in conformity with U.S. generally accepted accounting principles ("GAAP").

Use of estimates

The preparation of financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Recently adopted accounting standards

We adopted Accounting Standards Codification ("ASC") 842, *"Leases"* on January 1, 2019 using the optional transition method, which permits entities to apply the new guidance prospectively with certain practical expedients available. We elected the package of practical expedients which among other things allowed us to carry forward the historical lease classifications. We did not elect the hindsight practical expedient in determining the lease term for existing leases. The adoption of the new standard resulted in the recognition of operating lease assets of \$32.7 million and operating lease liabilities of \$32.1 million on the Statement of Financial Position at January 1, 2019. The adoption of this standard did not have a material impact on our Statement of Operations and had no impact on our net cash flows.

We adopted ASC 606, *"Revenue from Contracts with Customers"* on January 1, 2018, using the modified retrospective method applied to all contracts. The comparative information for periods preceding January 1, 2018 has not been restated and continues to be reported under the accounting standards in effect for those periods.

Under ASC 606, we determined that we have two performance obligations under the subscriber's agreement. The first performance obligation is providing policy issuance and renewal services. The second performance obligation is acting as the attorney-in-fact on behalf of the Exchange, as well as the service provider for its insurance subsidiaries, with respect to all administrative services. Upon adoption of ASC 606, the management fee earned per the subscriber's agreement, currently 25% of all direct and affiliated assumed premiums written by the Exchange, is allocated between the two performance obligations. Prior to the adoption of ASC 606, the entire management fee was allocated to the policy issuance and renewal services. Additionally, the expenses we incur and related reimbursements we receive related to the administrative services are presented gross in our Statement of Operations effective January 1, 2018.

On January 1, 2018, we established a contract liability of \$48.5 million representing the portion of revenue not yet earned related to the administrative services to be provided in subsequent years. We recorded a related deferred tax asset of \$10.2 million and a cumulative effect adjustment that reduced retained earnings by \$38.3 million. The adoption of ASC 606 changed the presentation of our Statement of Cash Flows, but had no net impact to our cash flows.

In 2018, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2018-02, *"Income Statement-Reporting Comprehensive Income-Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income"*, which permits entities to reclassify from accumulated other comprehensive income to retained earnings tax effects stranded in accumulated other comprehensive income as a result of tax reform. We elected to early adopt this guidance effective December 31, 2017 using a portfolio method, which resulted in a decrease of \$26.4 million in accumulated other comprehensive income and a corresponding increase in retained earnings.

Recently issued accounting standards

In August 2018, the FASB issued ASU 2018-15, *"Intangibles-Goodwill and Other Internal-Use Software"*, which aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. ASU 2018-15 is effective for interim and annual reporting periods beginning after December 15, 2019. The amendments under ASU 2018-15 may be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption and early adoption is permitted. We adopted this guidance on a prospective basis on January 1, 2020 and there was no material impact on our financial statements or disclosures.

In June 2016, the FASB issued ASU 2016-13, *"Financial Instruments-Credit Losses"*, which requires financial assets measured at amortized cost to be presented at the net amount expected to be collected through the use of a new forward-looking expected loss model and credit losses related to available-for-sale debt securities to be recognized through an allowance for credit losses. New disclosures are also required upon adoption of this guidance. ASU 2016-13 is effective for interim and annual reporting

periods beginning after December 15, 2019. Our financial assets subject to this guidance include our receivable from Erie Insurance Exchange, agent loans, and investments. We do not expect a significant credit loss exposure for our receivable from Erie Insurance Exchange given the financial strength of the Exchange and the lack of any historical credit loss. As the majority of our agent loans are senior secured and have experienced only insignificant default amounts, we have historically not recorded an allowance for credit losses related to our agent loans. Upon adoption of this guidance on January 1, 2020, we established allowances for both the receivable from Erie Insurance Exchange and agent loans and recognized an immaterial cumulative effect adjustment. Our investments are not measured at amortized cost, and therefore do not require the use of a new expected loss model. Our available-for-sale securities will continue to be monitored for credit losses, which will be limited to the amount by which the fair value is below amortized cost and reflected as an allowance for credit losses rather than a reduction of the carrying value of the asset.

Cash and cash equivalents – Cash, money market accounts and other short-term, highly liquid investments with a maturity of three months or less at the date of purchase, are considered cash and cash equivalents.

Investments

Available-for-sale securities – Fixed maturity debt securities and redeemable preferred stock are classified as available-for-sale and reported at fair value with unrealized investment gains and losses, net of income taxes, recognized in other comprehensive income (loss). Available-for-sale securities with a remaining maturity of 12 months or less and any security that we intend to sell as of the reporting date are classified as current assets.

Available-for-sale securities are evaluated monthly for other-than-temporary impairment loss. For securities that have experienced a decline in fair value below amortized cost and that we intend to sell, or for which it is more likely than not we will be required to sell the security before recovery of its amortized cost, an other-than-temporary impairment is recognized in earnings. Securities that have experienced a decline in fair value and that we do not intend to sell, and that we will not be required to sell before recovery, are evaluated to determine if the decline in fair value is other-than-temporary. Some factors considered in this evaluation include the extent and duration to which fair value is less than cost, historical operating performance and financial condition of the issuer, short and long-term prospects of the issuer and its industry based upon analysts' recommendations, specific events that occurred affecting the issuer, including a ratings downgrade, near term liquidity position of the issuer and compliance with financial covenants.

If a decline is deemed to be other-than-temporary, an assessment is made to determine the amount of the total impairment related to a credit loss and that related to all other factors. Consideration is given to all available information relevant to the collectability of the security in this determination. When the entire amortized cost basis of the security will not be recovered, a credit loss exists. For securities with credit impairments that we did not intend to sell, the credit portion of the loss would be recorded through net income and the non-credit portion of the impairment would be recorded in other comprehensive income. Currently, we have the intent to sell all of our securities that have been determined to have a credit-related impairment. As a result, the entire amount of any impairment is recognized in earnings.

Equity securities – Non-redeemable preferred and common stocks are classified as equity securities and reported at fair value with changes in fair value recognized in net realized investment gains (losses). Prior to January 1, 2018, equity securities were classified as available-for-sale and changes in fair value were recognized in other comprehensive income. Securities that we intend to sell as of the reporting date are classified as current assets.

Realized gains and losses and investment income – Realized gains and losses on sales of available-for-sale and equity securities are recognized in income based upon the specific identification method and reported as net realized investment gains (losses). Interest income is recognized as earned and includes amortization of premium and accretion of discount. Income is recognized based on the constant effective yield method, which includes periodically updated prepayment assumptions obtained from third party data sources on our prepaying securities. The effective yield for prepaying securities is recalculated on a retrospective basis. Dividend income is recognized at the ex-dividend date. Both interest and dividend income are reported as net investment income.

Limited partnership investments – Limited partnership investments primarily include U.S. and foreign private equity investments and are recorded using the equity method of accounting. The partnerships record assets on their balance sheet at fair value. While we perform various procedures in review of the general partners' valuations, we rely on the general partners' financial statements as the best available information to record our share of the partnership unrealized gains and losses resulting from valuation changes. Due to the availability of financial statements provided by the general partner, our share of limited partnership results is generally recorded on a quarter lag within equity in earnings (losses) of limited partnerships. Cash contributions made to and distributions received from the partnerships are recorded in the period in which the transaction

occurs. We have made no new limited partnership commitments since 2006, and the balance of limited partnership investments is expected to continue to decrease over time as additional distributions are received.

Deferred taxes

Deferred tax assets and liabilities are recorded for temporary differences between the tax basis of assets and liabilities and the reported amounts in the financial statements, using the statutory tax rates in effect for the year in which the differences are expected to reverse. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the results of operations in the period that includes the enactment date under the law. The need for valuation allowances on deferred tax assets are estimated based upon our assessment of the realizability of such amounts.

Fixed assets

Fixed assets are stated at cost less accumulated depreciation and amortization. Fixed assets are primarily comprised of software, which includes internally used capitalized software and development costs, as well as equipment, buildings and building improvements, and leasehold improvements. Assets in use are depreciated using the straight-line method over the estimated useful life except for leasehold improvements, which are depreciated over the shorter of their economic useful life or the lease term. Software is depreciated over periods ranging from 3-7 years, equipment is depreciated over 3-10 years, and buildings and building improvements are depreciated over 20-45 years. We review long-lived assets for impairment whenever events or changes indicate that the carrying value may not be recoverable. Under these circumstances, if the fair value were less than the carrying amount of the asset, we would recognize a loss for the difference. We capitalize applicable interest charges incurred during the construction period of significant long-term building projects as part of the historical cost of the asset.

Other assets

Other assets include agent loans, operating lease assets and other long-term prepaid assets. Agent loans are carried at unpaid principal balance with interest recorded in investment income as earned. It is our policy to charge the loans that are in default directly to expense. We do not record an allowance for credit losses on these loans, as the majority of the loans are senior secured and historically have had insignificant default amounts.

The determination of whether an arrangement is a lease and the related lease classification is made at inception of a contract. Our leases are classified as operating leases. Effective January 1, 2019, operating lease assets and liabilities are recorded at inception based on the present value of the future minimum lease payments over the lease term at commencement date. When an implicit rate for the lease is not available, we use our incremental borrowing rate based on the information available at commencement date to determine the present value of future payments. Lease terms include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. Most of our lease contracts contain lease and non-lease components. Non-lease components are expensed as incurred. Operating lease assets are included in other assets, and the current and noncurrent portions of the operating lease liabilities are included in accounts payable and accrued expenses and other long-term liabilities, respectively.

Agent bonus estimates

Our more significant agent bonus plan is based upon an individual agency's property and casualty underwriting profitability and also includes a component for growth in agency property and casualty premiums if the agency's underwriting profitability targets for the book of business are met. The estimate for this agent bonus plan is based upon the performance over 36 months, and is modeled on a monthly basis using actual underwriting results for the two prior years and current year-to-date actual results and forecasted results for the remainder of the year. Our second agent bonus plan is based on an agency's one-year underwriting profitability and uses a similar model but considers actual and forecasted results for a calendar year only. At December 31 of each year, we use actual data available and record an accrual based upon the expected payment amount. These costs are included in cost of operations - policy issuance and renewal services.

Recognition of management fee revenue

We earn management fees from the Exchange under the subscriber's agreement for services provided. Pursuant to the subscriber's agreement, we may retain up to 25% of all direct and affiliated assumed premiums written by the Exchange. The management fee rate is set at least annually by our Board of Directors. The management fee revenue is calculated by multiplying the management fee rate by the direct and affiliated assumed premiums written by the Exchange. Upon adoption of ASC 606 beginning January 1, 2018, we determined we have two performance obligations under the subscriber's agreement. The first performance obligation is to provide policy issuance and renewal services. The second performance obligation is acting as the attorney-in-fact with respect to the administrative services. Beginning January 1, 2018, our management fee revenue is allocated to these two performance obligations. Prior to the adoption of ASC 606, the entire management fee was allocated to the policy issuance and renewal services.

Management fee revenue allocated to the policy issuance and renewal services is recognized at the time of policy issuance or renewal, because it is at the time of policy issuance or renewal when the economic benefit of the service we provide (the substantially completed policy issuance or renewal service) and the control of the promised asset (the executed insurance policy) transfers to the customer.

Management fee revenue allocated to the second performance obligation relates to us acting as the attorney-in-fact on behalf of the Exchange, as well as the service provider for its insurance subsidiaries, with respect to the administrative services and is recognized over a four-year period representing the time over which the economic benefit of the services provided (i.e. management of the administrative services) transfers to the customer.

Administrative services

By virtue of its legal structure as a reciprocal insurer, the Exchange does not have any employees or officers. Therefore, it enters into contractual relationships by and through an attorney-in-fact. Indemnity serves as the attorney-in-fact on behalf of the Exchange with respect to its administrative services in accordance with the subscriber's agreement. The Exchange's insurance subsidiaries also utilize Indemnity for these services in accordance with the service agreements between each of the subsidiaries and Indemnity. Claims handling services include costs incurred in the claims process, including the adjustment, investigation, defense, recording and payment functions. Life insurance management services include costs incurred in the management and processing of life insurance business. Investment management services are related to investment trading activity, accounting and all other functions attributable to the investment of funds. Included in these expenses are allocations of costs for departments that support these administrative functions. Common overhead expenses and certain service department costs incurred by us on behalf of the Exchange and its insurance subsidiaries are reimbursed by the proper entity based upon appropriate utilization statistics (employee count, square footage, vehicle count, project hours, etc.) specifically measured to accomplish proportional allocations, which we believe are reasonable. Prior to the adoption of ASC 606, we recorded the reimbursements we receive for the administrative services expenses as receivables from the Exchange and its subsidiaries with a corresponding reduction to our expenses. Total cash settlements for the Exchange and its subsidiaries were \$522.3 million in 2017. Upon adoption of ASC 606 on January 1, 2018, the expenses we incur and related reimbursements we receive for administrative services are presented gross in our Statement of Operations. Reimbursements are settled on a monthly basis. The amounts incurred for these services are reimbursed to Indemnity at cost in accordance with the subscriber's agreement and the service agreements. State insurance regulations require that intercompany service agreements and any material amendments be approved in advance by the state insurance department.

Recognition of service agreement revenue

Service agreement revenue consists of service charges we collect from policyholders for providing multiple payment plans on policies written by the Exchange. Service charges, which are flat dollar charges for each installment billed beyond the first installment, are recognized as revenue when bills are rendered to the policyholder. Service agreement revenue also includes late payment and policy reinstatement fees, which are also recognized as revenue when bills are rendered to the policyholder.

Note 3. Revenue

The majority of our revenue is derived from the subscriber's agreement between us and the subscribers (policyholders) at the Exchange. Pursuant to the subscriber's agreement, we earn a management fee calculated as a percentage, not to exceed 25%, of all direct and affiliated assumed written premiums of the Exchange. We account for management fee revenue in accordance with ASC 606, which we adopted in 2018. See Note 2, "Significant Accounting Policies".

We allocate a portion of our management fee revenue, currently 25% of the direct and affiliated assumed written premiums of the Exchange, between the two performance obligations we have under the subscriber's agreement. The first performance obligation is to provide policy issuance and renewal services to the subscribers (policyholders) at the Exchange, and the second is to act as attorney-in-fact on behalf of the Exchange, as well as the service provider for its insurance subsidiaries, with respect to all administrative services. The transaction price, including management fee revenue and administrative service reimbursement revenue, is allocated based on the estimated standalone selling prices developed using industry information and other available information for similar services. We update the transaction price allocation annually based upon the most recent information available. There was no material change to the allocation in 2019.

The first performance obligation is to provide policy issuance and renewal services that result in executed insurance policies between the Exchange or one of its insurance subsidiaries and the subscriber (policyholder). Our customer, the subscriber (policyholder), receives economic benefits when substantially all the policy issuance or renewal services are complete and an insurance policy is issued or renewed by the Exchange or one of its insurance subsidiaries. It is at the time of policy issuance or renewal that the allocated portion of revenue is recognized.

The Exchange, by virtue of its legal structure as a reciprocal insurer, does not have any employees or officers. Therefore, it enters into contractual relationships by and through an attorney-in-fact. Indemnity serves as the attorney-in-fact on behalf of the Exchange with respect to its administrative services in accordance with the subscriber's agreement. The Exchange's insurance subsidiaries also utilize Indemnity for these services in accordance with the service agreements between each of the subsidiaries and Indemnity. Collectively, these services represent a second performance obligation under the subscriber's agreement and the service agreements. The revenue allocated to this performance obligation is recognized over time as these services are provided. The portion of revenue not yet earned is recorded as a contract liability in the Statements of Financial Position. The administrative services expenses we incur and the related reimbursements we receive are recorded gross in the Statements of Operations.

Indemnity records a receivable from the Exchange for management fee revenue when the premium is written or assumed from affiliates by the Exchange. Indemnity collects the management fee from the Exchange when the Exchange collects the premiums from the subscribers (policyholders). As the Exchange issues policies with annual terms only, cash collections generally occur within one year.

The amount of management fee revenue we receive can vary due to the potential of mid-term cancellations. Management fees are returned to the Exchange when policyholders cancel their insurance coverage mid-term and unearned premiums are refunded to them. We maintain an estimated allowance to reduce the management fee to its estimated net realizable value to account for the potential of mid-term policy cancellations based on historical cancellation rates. This estimated allowance has been allocated between the two performance obligations consistent with the revenue allocation proportions.

The following table disaggregates revenue by our two performance obligations for the years ended December 31:

<i>(in thousands)</i>	2019	2018	2017
Management fee revenue - policy issuance and renewal services, net	\$ 1,810,457	\$ 1,719,567	\$ 1,662,625
Management fee revenue - administrative services, net	57,204	53,632	—
Administrative services reimbursement revenue	582,010	580,336	—
Total administrative services	\$ 639,214	\$ 633,968	\$ —

Note 4. Earnings Per Share

Class A and Class B basic earnings per share and Class B diluted earnings per share are calculated under the two-class method. The two-class method allocates earnings to each class of stock based upon its dividend rights. Class B shares are convertible into Class A shares at a conversion ratio of 2,400 to 1. See Note 13, "Capital Stock".

Class A diluted earnings per share are calculated under the if-converted method, which reflects the conversion of Class B shares to Class A shares. Diluted earnings per share calculations include the dilutive effect of assumed issuance of stock-based awards under compensation plans that have the option to be paid in stock using the treasury stock method. See Note 11, "Incentive and Deferred Compensation Plans".

In 2017, we recorded a one-time net non-cash tax expense of \$10.1 million as a result of the enactment of the Tax Cuts and Jobs Act ("TCJA"). See Note 12, "Income Taxes". This resulted in a reduction in Class A basic earnings per share of \$0.22 and diluted earnings per share of \$0.19, and a reduction in Class B basic earnings per share of \$33 and diluted earnings per share of \$32.

A reconciliation of the numerators and denominators used in the basic and diluted per-share computations is presented as follows for each class of common stock:

(dollars in thousands, except per share data)

	2019			For the years ended December 31, 2018			2017		
	Allocated net income (numerator)	Weighted shares (denominator)	Per- share amount	Allocated net income (numerator)	Weighted shares (denominator)	Per- share amount	Allocated net income (numerator)	Weighted shares (denominator)	Per- share amount
Class A – Basic EPS:									
Income available to Class A stockholders	\$ 314,227	46,188,836	\$ 6.80	\$ 285,864	46,188,637	\$ 6.19	\$ 195,386	46,186,831	\$ 4.23
Dilutive effect of stock-based awards	0	30,224	—	0	25,776	—	0	49,832	—
Assumed conversion of Class B shares	2,594	6,100,800	—	2,360	6,100,800	—	1,613	6,100,800	—
Class A – Diluted EPS:									
Income available to Class A stockholders on Class A equivalent shares	\$ 316,821	52,319,860	\$ 6.06	\$ 288,224	52,315,213	\$ 5.51	\$ 196,999	52,337,463	\$ 3.76
Class B – Basic EPS:									
Income available to Class B stockholders	\$ 2,594	2,542	\$ 1,020	\$ 2,360	2,542	\$ 928	\$ 1,613	2,542	\$ 635
Class B – Diluted EPS:									
Income available to Class B stockholders	\$ 2,593	2,542	\$ 1,020	\$ 2,359	2,542	\$ 928	\$ 1,613	2,542	\$ 634

Note 5. Fair Value

Our available-for-sale debt securities and equity securities are recorded at fair value, which is the price that would be received to sell the asset in an orderly transaction between willing market participants as of the measurement date.

Valuation techniques used to derive the fair value of our available-for-sale debt securities and equity securities are based upon observable and unobservable inputs. Observable inputs reflect market data obtained from independent sources. Unobservable inputs reflect our own assumptions regarding fair market value for these securities. Financial instruments are categorized based upon the following characteristics or inputs to the valuation techniques:

- Level 1 – Quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity can access at the measurement date.
- Level 2 – Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3 – Unobservable inputs for the asset or liability.

Estimates of fair values for our investment portfolio are obtained primarily from a nationally recognized pricing service. Our Level 1 securities are valued using an exchange traded price provided by the pricing service. Pricing service valuations for Level 2 securities include multiple verifiable, observable inputs including benchmark yields, reported trades, broker/dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, and reference data. Pricing service valuations for Level 3 securities are based upon proprietary models and are used when observable inputs are not available or in illiquid markets.

Although virtually all of our prices are obtained from third party sources, we also perform internal pricing reviews, including evaluating the methodology and inputs used to ensure that we determine the proper classification level of the financial instrument and reviewing securities with price changes that vary significantly from current market conditions or independent third party price sources. Price variances are investigated and corroborated by market data and transaction volumes. We have reviewed the pricing methodologies of our pricing service as well as other observable inputs and believe that the prices adequately consider market activity in determining fair value.

In limited circumstances we adjust the price received from the pricing service when, in our judgment, a better reflection of fair value is available based upon corroborating information and our knowledge and monitoring of market conditions such as a disparity in price of comparable securities and/or non-binding broker quotes. In other circumstances, certain securities are internally priced because prices are not provided by the pricing service.

When a price from the pricing service is not available, values are determined by obtaining broker/dealer quotes and/or market comparables. When available, we obtain multiple quotes for the same security. The ultimate value for these securities is determined based upon our best estimate of fair value using corroborating market information. Our evaluation includes the consideration of benchmark yields, reported trades, issuer spreads, two-sided markets, benchmark securities, bids, offers, and reference data.

The following tables present our fair value measurements on a recurring basis by asset class and level of input as of:

(in thousands)	December 31, 2019			
	Fair value measurements using:			
	Total	Level 1	Level 2	Level 3
Available-for-sale securities:				
Corporate debt securities ⁽¹⁾	\$ 454,880	\$ 2,683	\$ 443,873	\$ 8,324
Residential mortgage-backed securities ⁽¹⁾	125,343	0	125,343	0
Commercial mortgage-backed securities ⁽¹⁾	67,541	0	64,220	3,321
Collateralized debt obligations ⁽¹⁾	77,856	0	77,856	0
Other debt securities	5,081	0	5,081	0
Total available-for-sale securities	730,701	2,683	716,373	11,645
Equity securities - nonredeemable preferred and common stock ⁽¹⁾				
Financial services sector	53,513	14,927	38,586	0
Utilities sector	6,818	3,190	3,628	0
Communications sector	3,433	3,433	0	0
Energy sector	1,881	0	1,881	0
Other sectors	1,488	0	1,488	0
Total equity securities	67,133	21,550	45,583	0
Total	\$ 797,834	\$ 24,233	\$ 761,956	\$ 11,645

(in thousands)	December 31, 2018			
	Fair value measurements using:			
	Total	Level 1	Level 2	Level 3
Available-for-sale securities:				
U.S. Treasury ⁽¹⁾	\$ 208,412	\$ 0	\$ 208,412	\$ 0
States & political subdivisions ⁽¹⁾	159,023	0	159,023	0
Corporate debt securities	249,947	0	237,370	12,577
Residential mortgage-backed securities	4,609	0	4,609	0
Commercial mortgage-backed securities	46,515	0	46,515	0
Collateralized debt obligations	64,239	0	64,239	0
Other debt securities	15,778	0	15,778	0
Total available-for-sale securities	748,523	0	735,946	12,577
Equity securities - nonredeemable preferred stock				
Financial services sector	11,853	1,809	10,044	0
Total equity securities	11,853	1,809	10,044	0
Other limited partnership investments ⁽²⁾	3,206	—	—	—
Total	\$ 763,582	\$ 1,809	\$ 745,990	\$ 12,577

- (1) In 2018, we began selling off our municipal bonds as part of a portfolio rebalancing and invested proceeds in short-term U.S. Treasuries. In 2019, proceeds from sales and maturities of the remaining municipal bond portfolio and short-term U.S. Treasuries were reinvested in corporate debt, structured securities and preferred stock.
- (2) The limited partnership investment measured at fair value represents one real estate fund included on the balance sheet as a limited partnership investment reported under the fair value option using the net asset value (NAV) practical expedient, which is not required to be categorized in the fair value hierarchy. The fair value of this investment is based on our proportionate share of the NAV from the most recent partners' capital statements received from the general partner, which is generally one quarter prior to our balance sheet date. We consider observable market data and perform a review validating the appropriateness of the NAV at each balance sheet date. Liquidation of this fund was completed in January 2019.

The following table presents our fair value measurements on a recurring basis by pricing source as of:

(in thousands)	December 31, 2019			
	Total	Level 1	Level 2	Level 3
Available-for-sale securities:				
Pricing services	\$ 730,551	\$ 2,683	\$ 716,373	\$ 11,495
Internal modeling	150	0	0	150
Total available-for-sale securities	730,701	2,683	716,373	11,645
Equity securities priced using pricing services	67,133	21,550	45,583	0
Total	\$ 797,834	\$ 24,233	\$ 761,956	\$ 11,645

Quantitative and Qualitative Disclosures about Unobservable Inputs

The following table presents quantitative information about the significant unobservable inputs utilized in the fair value measurements of Level 3 assets. Level 3 securities where cost is the best estimate of fair value totaled \$0.2 million at December 31, 2019 and are excluded from the table below. When a non-binding broker quote was the only input available, the security was classified within Level 3. The quantitative detail of the unobservable inputs is neither provided nor reasonably available to us and therefore has not been included in the table below. These investments totaled \$1.3 million at December 31, 2019 and \$12.6 million at December 31, 2018. The weighted average is calculated based on estimated fair value.

(dollars in thousands)	December 31, 2019					
	Fair value	Valuation techniques	Unobservable input	Range (basis points)	Weighted average (basis points)	Impact of increase in input on estimated fair value
Corporate debt securities - bank loans	\$ 8,048	Syndicated loan model	Market residual yield ⁽¹⁾	-489 - +566	+76	Decrease
Commercial mortgage-backed securities	2,143	Relative value pricing model	Credit spread ⁽²⁾	+49 - +53	+51	Decrease
<p>(1) Values for bank loans classified as Level 3 are determined by our pricing vendor based on model yield curves adjusted for observable inputs. The market residual yield represents a net adjustment to the model yield curve for unobservable input factors.</p> <p>(2) Values for commercial mortgage-backed securities classified as Level 3 include adjustments to the base spread over the appropriate U.S. Treasury yield assuming no prepayments until penalty provisions have expired.</p>						

We review the fair value hierarchy classifications each reporting period. Transfers between hierarchy levels may occur due to changes in available market observable inputs.

Level 3 Assets – Year-to-Date Change:

(in thousands)	Beginning balance at December 31, 2018	Included in earnings ⁽¹⁾	Included in other comprehensive income	Purchases	Sales	Transfers into Level 3 ⁽²⁾	Transfers out of Level 3 ⁽²⁾	Ending balance at December 31, 2019
Available-for-sale securities:								
Corporate debt securities	\$ 12,577	\$ 10	\$ 146	\$ 2,020	\$ (7,415)	\$ 11,542	\$ (10,556)	\$ 8,324
Residential mortgage-backed securities	0	4	15	921	(32)	0	(908)	0
Commercial mortgage-backed securities	0	(9)	(21)	478	(1,068)	7,281	(3,340)	3,321
Collateralized debt obligations	0	0	1	2,300	0	0	(2,301)	0
Total Level 3 available-for-sale securities	\$ 12,577	\$ 5	\$ 141	\$ 5,719	\$ (8,515)	\$ 18,823	\$ (17,105)	\$ 11,645

Level 3 Assets – Year-to-Date Change:

<i>(in thousands)</i>	Beginning balance at December 31, 2017	Included in earnings ⁽¹⁾	Included in other comprehensive income	Purchases	Sales	Transfers into Level 3 ⁽²⁾	Transfers out of Level 3 ⁽²⁾	Ending balance at December 31, 2018
Available-for-sale securities:								
Corporate debt securities	\$ 7,879	\$ 6	\$ (312)	\$ 5,550	\$ (2,854)	\$ 18,232	\$ (15,924)	\$ 12,577
Collateralized debt obligations	2,200	0	10	905	0	0	(3,115)	0
Total Level 3 available-for-sale securities	\$ 10,079	\$ 6	\$ (302)	\$ 6,455	\$ (2,854)	\$ 18,232	\$ (19,039)	\$ 12,577

(1) These amounts are reported as net investment income and net realized investment gains (losses) for each of the periods presented above.

(2) Transfers into and/or (out) of Level 3 are primarily attributable to the availability of market observable information and the re-evaluation of the observability of pricing inputs.

The change in unrealized gains or losses included in other comprehensive income (loss) related to Level 3 securities held at the reporting date is as follows for the years ended December 31:

<i>(in thousands)</i>	2019	2018	2017
Available-for-sale securities:			
Corporate debt securities	\$ 38	\$ (554)	\$ —
Commercial mortgage-backed securities	30	—	—
Net unrealized gains (losses) on Level 3 securities held at reporting date	\$ 68	\$ (554)	\$ —

Financial instruments not carried at fair value

The following table presents the carrying values and fair values of financial instruments categorized as Level 3 in the fair value hierarchy that are recorded at carrying value as of:

<i>(in thousands)</i>	December 31, 2019		December 31, 2018	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Agent loans	\$ 67,696	\$ 71,602	\$ 58,006	\$ 54,110
Long-term borrowings	98,080	101,888	99,730	94,057

Note 6. Investments

Available-for-sale securities

See Note 5, "Fair Value" for additional fair value disclosures. The following tables summarize the cost and fair value of our available-for-sale securities as of:

(in thousands)	December 31, 2019			
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Estimated fair value
Corporate debt securities ⁽¹⁾	\$ 450,295	\$ 6,289	\$ 1,704	\$ 454,880
Residential mortgage-backed securities ⁽¹⁾	124,337	1,056	50	125,343
Commercial mortgage-backed securities ⁽¹⁾	67,210	479	148	67,541
Collateralized debt obligations ⁽¹⁾	78,059	44	247	77,856
Other debt securities	5,049	71	39	5,081
Total available-for-sale securities	\$ 724,950	\$ 7,939	\$ 2,188	\$ 730,701

(in thousands)	December 31, 2018			
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Estimated fair value
U.S. Treasury ⁽¹⁾	\$ 208,610	\$ 18	\$ 216	\$ 208,412
States & political subdivisions ⁽¹⁾	157,003	2,020	0	159,023
Corporate debt securities	259,362	139	9,554	249,947
Residential mortgage-backed securities	4,603	38	32	4,609
Commercial mortgage-backed securities	47,022	80	587	46,515
Collateralized debt obligations	65,039	30	830	64,239
Other debt securities	15,756	33	11	15,778
Total available-for-sale securities	\$ 757,395	\$ 2,358	\$ 11,230	\$ 748,523

(1) In 2018, we began selling off our municipal bonds as part of a portfolio rebalancing and invested proceeds in short-term U.S. Treasuries. In 2019, proceeds from sales and maturities of the remaining municipal bond portfolio and short-term U.S. Treasuries were reinvested in corporate debt, structured securities and preferred stock.

The amortized cost and estimated fair value of available-for-sale securities at December 31, 2019, are shown below by remaining contractual term to maturity. Expected maturities may differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties.

(in thousands)	December 31, 2019	
	Amortized cost	Estimated fair value
Due in one year or less	\$ 32,613	\$ 32,655
Due after one year through five years	336,377	339,033
Due after five years through ten years	120,716	122,068
Due after ten years	235,244	236,945
Total available-for-sale securities	\$ 724,950	\$ 730,701

The below securities have been evaluated and determined to be temporary impairments for which we expect to recover our entire principal plus interest. The following tables present available-for-sale securities based on length of time in a gross unrealized loss position as of:

	December 31, 2019						
	Less than 12 months		12 months or longer		Total		
	Fair value	Unrealized losses	Fair value	Unrealized losses	Fair value	Unrealized losses	No. of holdings
<i>(dollars in thousands)</i>							
Corporate debt securities	\$ 25,804	\$ 342	\$ 15,699	\$ 1,362	\$ 41,503	\$ 1,704	158
Residential mortgage-backed securities	16,712	50	0	0	16,712	50	7
Commercial mortgage-backed securities	21,981	147	372	1	22,353	148	30
Collateralized debt obligations	20,889	33	41,010	214	61,899	247	49
Other debt securities	2,350	39	0	0	2,350	39	2
Total available-for-sale securities	\$ 87,736	\$ 611	\$ 57,081	\$ 1,577	\$ 144,817	\$ 2,188	246
Quality breakdown of available-for-sale securities:							
Investment grade	\$ 76,315	\$ 287	\$ 46,390	\$ 218	\$ 122,705	\$ 505	100
Non-investment grade	11,421	324	10,691	1,359	22,112	1,683	146
Total available-for-sale securities	\$ 87,736	\$ 611	\$ 57,081	\$ 1,577	\$ 144,817	\$ 2,188	246

	December 31, 2018						
	Less than 12 months		12 months or longer		Total		
	Fair value	Unrealized losses	Fair value	Unrealized losses	Fair value	Unrealized losses	No. of holdings
<i>(dollars in thousands)</i>							
U.S. Treasury	\$ 129,474	\$ 19	\$ 11,656	\$ 197	\$ 141,130	\$ 216	7
Corporate debt securities	157,300	6,866	86,586	2,688	243,886	9,554	635
Residential mortgage-backed securities	777	6	1,618	26	2,395	32	3
Commercial mortgage-backed securities	17,624	175	16,997	412	34,621	587	30
Collateralized debt obligations	55,246	826	1,248	4	56,494	830	39
Other debt securities	8,213	11	0	0	8,213	11	7
Total available-for-sale securities	\$ 368,634	\$ 7,903	\$ 118,105	\$ 3,327	\$ 486,739	\$ 11,230	721
Quality breakdown of available-for-sale securities:							
Investment grade	\$ 242,821	\$ 1,295	\$ 98,118	\$ 1,641	\$ 340,939	\$ 2,936	147
Non-investment grade	125,813	6,608	19,987	1,686	145,800	8,294	574
Total available-for-sale securities	\$ 368,634	\$ 7,903	\$ 118,105	\$ 3,327	\$ 486,739	\$ 11,230	721

Net investment income

Investment income, net of expenses, was generated from the following portfolios for the years ended December 31:

<i>(in thousands)</i>	2019	2018	2017
Available-for-sale securities ⁽¹⁾	\$ 22,496	\$ 24,978	\$ 23,669
Equity securities	1,418	628	—
Cash equivalents and other	10,546	5,628	2,486
Total investment income	34,460	31,234	26,155
Less: investment expenses	1,061	1,025	1,516
Investment income, net of expenses	\$ 33,399	\$ 30,209	\$ 24,639

(1) Includes interest earned on note receivable from EFL of \$1.6 million in 2018 and \$1.7 million in 2017. The note was repaid in full in 2018.

Realized investment gains (losses)

Realized gains (losses) on investments were as follows for the years ended December 31:

<i>(in thousands)</i>	2019	2018	2017
Available-for-sale securities:			
Gross realized gains	\$ 6,258	\$ 1,892	\$ 2,996
Gross realized losses	(1,639)	(3,189)	(1,756)
Net realized gains (losses) on available-for-sale securities	4,619	(1,297)	1,240
Equity securities	1,484	(819)	—
Miscellaneous	0	106	94
Net realized investment gains (losses)	\$ 6,103	\$ (2,010)	\$ 1,334

The portion of net unrealized gains and losses recognized during the reporting period related to equity securities held at the reporting date is calculated as follows for the years ended December 31:

<i>(in thousands)</i>	2019	2018	2017
Equity securities: ⁽¹⁾			
Net gains (losses) recognized during the period	\$ 1,484	\$ (819)	\$ —
Less: net gains (losses) recognized on securities sold	360	(86)	—
Net unrealized gains (losses) recognized on securities held at reporting date	\$ 1,124	\$ (733)	\$ —

(1) Effective January 1, 2018, changes in unrealized gains and losses on equity securities are included in net realized investment gains (losses).

Other-than-temporary impairments on available-for-sale securities recognized in earnings were \$0.2 million, \$1.6 million and \$0.2 million for the years ended December 31, 2019, 2018 and 2017, respectively. We have the intent to sell all credit-impaired available-for-sale securities; therefore, the entire amount of the impairment charges were included in earnings and no impairments were recognized in other comprehensive income (loss). See also Note 2, "Significant Accounting Policies".

Note 7. Fixed Assets

The following table summarizes our fixed assets by category at December 31:

<i>(in thousands)</i>	2019	2018
Land, buildings, and building improvements	\$ 5,068	\$ —
Leasehold improvements	1,313	617
Software	191,709	163,735
Equipment	14,546	15,075
Furniture, fixtures, and equipment	1,934	—
Projects in progress	22,992	10,392
Construction in progress	122,801	66,088
Total fixed assets, gross	360,363	255,907
Less: Accumulated depreciation and amortization	(138,984)	(125,075)
Fixed assets, net	\$ 221,379	\$ 130,832

In 2018, we sold the field offices we owned to the Exchange at the current independent appraised value in order to align the ownership interest of these facilities with the functions being performed at these locations, which are claims-related activities. We recognized a gain on the sale of \$3.4 million, which is included in "Other income (expense)". See Note 15, "Related Party". The increase in land, buildings, and building improvements in 2019 resulted from the purchase of additional office space from a third party.

Software increased primarily related to mainframe software licenses and investments in data technology, as well as internally developed software projects completed and placed in production related to providing personal lines new product processing capabilities.

Projects in progress include certain computer software and software developments costs for internal use that are not yet subject to amortization.

Construction in progress includes a new office building that will serve as part of our principal headquarters. Capitalized interest included in construction in progress was \$3.4 million and \$2.1 million at December 31, 2019 and 2018, respectively. The building is expected to be completed in 2020 and is financed using a senior secured draw term loan credit facility. See Note 9, "Borrowing Arrangements".

Depreciation and amortization of fixed assets totaled \$16.8 million, \$13.4 million and \$14.8 million for the years ended December 31, 2019, 2018 and 2017, respectively, and is included in cost of operations - policy issuance and renewal services.

Note 8. Leases

The following table summarizes our lease assets and liabilities at December 31:

<i>(in thousands)</i>	2019	2018
Operating lease assets	\$ 22,401	\$ —
Operating lease liabilities - current	\$ 11,289	\$ —
Operating lease liabilities - long-term	10,665	—
Total operating lease liabilities	\$ 21,954	\$ —

We currently have leases for real estate, technology equipment, copiers, and vehicles. Our largest operating lease asset at December 31, 2019 of \$11.7 million is for home office space leased from the Exchange. Under this lease, rent is based on rental rates of like property and all operating expenses are the responsibility of the tenant (Indemnity). The lease agreement expires December 31, 2021. See Note 15, "Related Party".

Operating lease costs for the year ended 2019 totaled \$14.0 million. Of this amount, the Exchange and its subsidiaries reimbursed us \$6.0 million for the year ended 2019, which represents the allocated share of lease costs supporting administrative services activities.

Note 9. Borrowing Arrangements**Bank Line of Credit**

As of December 31, 2019, we have access to a \$100 million bank revolving line of credit with a \$25 million letter of credit sublimit that expires on October 30, 2023. As of December 31, 2019, a total of \$99.1 million remains available under the facility due to \$0.9 million outstanding letters of credit, which reduces the availability for letters of credit to \$24.1 million. We had no borrowings outstanding on our line of credit as of December 31, 2019. Investments with a fair value of \$110.1 million were pledged as collateral on the line at December 31, 2019. The securities pledged as collateral have no trading restrictions and are reported as available-for-sale securities and cash and cash equivalents as of December 31, 2019. The banks require compliance with certain covenants, which include leverage ratios and debt restrictions, for our line of credit. We are in compliance with all covenants at December 31, 2019.

Term Loan Credit Facility

In 2016, we entered into a credit agreement for a \$100 million senior secured draw term loan credit facility ("Credit Facility") for the acquisition of real property and construction of an office building to serve as part of our principal headquarters. On January 1, 2019, the Credit Facility converted to a fully-amortized term loan with monthly payments of principal and interest at a fixed rate of 4.35% over a period of 28 years. Investments with a fair value of \$112.4 million were pledged as collateral for the facility and are reported as available-for-sale securities and cash and cash equivalents as of December 31, 2019. The bank requires compliance with certain covenants, which include leverage ratios, debt restrictions and minimum net worth, for our Credit Facility. We are in compliance with all covenants at December 31, 2019.

The remaining unpaid balance from the Credit Facility is reported at carrying value, net of unamortized loan origination and commitment fees as long-term borrowings. See Note 5, "Fair Value" for the estimated fair value of these borrowings.

Annual principal payments

The following table sets forth future principal payments:

<i>(in thousands)</i>		
Year		Principal payments
2020	\$	1,979
2021		2,019
2022		2,109
2023		2,226
2024		2,302
Thereafter		87,445

Note 10. Postretirement Benefits

Pension plans

Our pension plans consist of a noncontributory defined benefit pension plan covering substantially all employees and an unfunded supplemental employee retirement plan ("SERP") for certain members of executive and senior management. The pension plans provide benefits to covered individuals satisfying certain age and service requirements. The defined benefit pension plan and SERP each provide benefits through a final average earnings formula.

Although we are the sponsor of these postretirement plans and record the funded status of these plans, the Exchange and its subsidiaries reimburse us for approximately 59% of the annual benefit expense of these plans, which represents pension benefits for employees performing administrative services and their allocated share of costs for employees in departments that support the administrative functions. For our funded pension plan, amounts are settled in cash for the portion of pension costs allocated to the Exchange and its subsidiaries. For our unfunded plans, we pay the obligations when due and amounts are settled in cash between entities when there is a payout.

Cost of pension plans

Pension plan cost includes the following components:

(in thousands)

	2019	2018	2017
Service cost for benefits earned	\$ 33,854	\$ 38,052	\$ 31,106
Interest cost on benefit obligation	39,306	35,382	34,275
Expected return on plan assets	(47,484)	(51,260)	(41,267)
Prior service cost amortization	1,394	1,353	871
Net actuarial loss amortization	5,113	12,809	9,301
Settlement cost ⁽¹⁾	—	—	302
Pension plan cost ⁽²⁾	\$ 32,183	\$ 36,336	\$ 34,588

(1) The final SERP benefit for two former executives was settled with lump sum payments in 2017.

(2) Pension plan costs represent the total cost before reimbursements to Indemnity from the Exchange and its subsidiaries.

Actuarial assumptions

The following table describes the assumptions at December 31 used to measure the year-end obligations and the net periodic benefit costs for the subsequent year:

	2019	2018	2017	2016
Employee pension plan:				
Discount rate	3.59%	4.47%	3.73%	4.24%
Expected return on assets	6.00	6.75	6.75	7.00
Compensation increases ⁽¹⁾	3.21	3.32	3.32	3.32
SERP:				
Discount rate – pre-retirement/post-retirement	3.59/3.09	4.47/3.97	3.73/3.23	4.24/3.74
Rate of compensation increase	5.00	5.00	5.00	5.00

(1) The rate of compensation increase for the employee plan is age-graded. An equivalent single compensation increase rate of 3.21% in 2019 and 3.32% in 2018 and 2017 would produce similar results.

The economic assumptions that have the most impact on the postretirement benefits expense are the discount rate and the long-term rate of return on plan assets. The discount rate assumption used to determine the benefit obligation for all periods presented was based upon a yield curve developed from corporate bond yield information.

The pension plan's expected long-term rate of return represents the average rate of return to be earned on plan assets over the period the benefits included in the benefit obligation are to be paid. To determine the expected long-term rate of return assumption, we utilized models based upon rigorous historical analysis and forward-looking views of the financial markets based upon key factors such as historical returns for the asset class' applicable indices, the correlations of the asset classes under various market conditions and consensus views on future real economic growth and inflation. The expected future return for each asset class is then combined by considering correlations between asset classes and the volatilities of each asset class to produce a reasonable range of asset return results within which our expected long-term rate of return assumption falls.

Funding policy/funded status

In 2018, we made accelerated pension contributions totaling \$80 million. Following our 2018 contributions, we would not expect to make a subsequent contribution until the sum of the target normal costs for plan years beginning on and after December 31, 2017 exceeds \$80 million, or earlier if a contribution is necessary to fund the plan to 100%. At that time, our funding policy will again generally be to contribute an amount equal to the greater of the target normal cost for the plan year, or the amount necessary to fund the plan to 100%. Additional contributions may be necessary or desirable due to future plan changes, our particular business or investment strategy, or pending law changes. The following table sets forth the funded status of the pension plans and the amounts recognized in the Statements of Financial Position at December 31:

(in thousands)

	2019	2018
Funded status at end of year	\$ (146,842)	\$ (118,596)
Pension liabilities – due within one year ⁽¹⁾	\$ (1,183)	\$ (1,730)
Pension liabilities – due after one year	(145,659)	(116,866)
Net amount recognized	\$ (146,842)	\$ (118,596)

(1) The current portion of pension liabilities is included in accounts payable and accrued liabilities.

Benefit obligations

Benefit obligations are described in the following tables. Accumulated and projected benefit obligations represent the obligations of a pension plan for past service as of the measurement date. The accumulated benefit obligation is the present value of pension benefits earned as of the measurement date based on employee service and compensation prior to that date. It differs from the projected benefit obligation in that the accumulated benefit obligation includes no assumptions to reflect expected future compensation. The following table sets forth a reconciliation of beginning and ending balances of the projected benefit obligation, as well as the accumulated benefit obligation at December 31:

(in thousands)

	2019	2018
Projected benefit obligation, beginning of year	\$ 886,165	\$ 951,666
Service cost for benefits earned	33,854	38,052
Interest cost on benefit obligation	39,306	35,382
Plan amendments	452	3,007
Actuarial loss (gain)	138,144	(123,910)
Benefits paid	(43,454)	(18,032)
Projected benefit obligation, end of year	\$ 1,054,467	\$ 886,165
Accumulated benefit obligation, end of year	\$ 858,209	\$ 727,340

Projected benefit obligations increased \$168.3 million at December 31, 2019 compared to December 31, 2018 due primarily to actuarial losses resulting from the lower discount rate discount rate used to measure the future benefit obligations. The discount rate decreased to 3.59% in 2019 from 4.47% in 2018. The increase in benefits paid of \$25.4 million in 2019 compared to 2018 was primarily due to a pension plan amendment offering a one-time lump sum payment to former vested employees.

Both the defined benefit plan and the SERP had projected benefit obligations in excess of plan assets at December 31:

	Projected Benefit Obligation in Excess of Plan Assets	
	2019	2018
Projected benefit obligation	\$ 1,054,467	\$ 886,165
Plan assets	907,625	767,569

The SERP had accumulated benefit obligations in excess of plan assets at December 31:

	Accumulated Benefit Obligation in Excess of Plan Assets	
	2019	2018
Accumulated benefit obligation	\$ 23,411	\$ 18,908
Plan assets	—	—

Pension assets

The following table sets forth a reconciliation of beginning and ending balances of the fair value of plan assets at December 31:

	2019	2018
Fair value of plan assets, beginning of year	\$ 767,569	\$ 743,900
Actual gain (loss) on plan assets	182,002	(38,360)
Employer contributions	1,508	80,061
Benefits paid	(43,454)	(18,032)
Fair value of plan assets, end of year	<u>\$ 907,625</u>	<u>\$ 767,569</u>

Accumulated other comprehensive loss

Net actuarial loss and prior service cost included in accumulated other comprehensive loss that were not yet recognized as components of net benefit costs were as follows:

	2019	2018
Net actuarial loss	\$ 142,678	\$ 144,165
Prior service cost	10,913	11,855
Net amount not yet recognized	<u>\$ 153,591</u>	<u>\$ 156,020</u>

Other comprehensive income

Amounts recognized in other comprehensive income for pension plans were as follows:

	2019	2018
Net actuarial loss (gain) arising during the year	\$ 3,626	\$ (34,290)
Amortization of net actuarial loss	(5,113)	(12,809)
Amortization of prior service cost	(1,394)	(1,353)
Amendments ⁽¹⁾	452	3,007
Total recognized in other comprehensive income	<u>\$ (2,429)</u>	<u>\$ (45,445)</u>

(1) In 2019, there was one new SERP participant. In 2018, there were five new SERP participants.

Asset allocation

The employee pension plan utilizes a return seeking and a liability asset matching allocation strategy. It is based upon the understanding that 1) equity investments are expected to outperform debt investments over the long-term, 2) the potential volatility of short-term returns from equities is acceptable in exchange for the larger expected long-term returns, and 3) a portfolio structured across investment styles and markets (both domestic and foreign) reduces volatility. As a result, the employee pension plan's investment portfolio utilizes a broadly diversified asset allocation across domestic and foreign equity and debt markets. The investment portfolio is composed of commingled pools that are dedicated exclusively to the management of employee benefit plan assets.

The target and actual asset allocations for the portfolio are as follows for the years ended December 31:

	Target asset allocation	Target asset allocation	Actual asset allocation	Actual asset allocation
	2019	2018	2019	2018
Asset allocation:				
Equity securities:				
U.S. equity securities	27% ⁽¹⁾	25%	28%	24%
Non-U.S. equity securities	18 ⁽²⁾	16	18	14
Total equity securities	45	41	46	38
Debt securities	54 ⁽³⁾	58	53	61
Other	1 ⁽⁴⁾	1	1	1
Total	100%	100%	100%	100%

(1) U.S. equity securities – 22% seek to achieve excess returns relative to the Russell 2000 Index. The remaining 78% of the allocation to U.S. equity securities are comprised of equity index funds that track the S&P 500.

(2) Non-U.S. equity securities – 11% are allocated to international small cap investments, while another 20% are allocated to international emerging market investments. The remaining 69% of the Non-U.S. equity securities are allocated to investments seeking to achieve excess returns relative to an international market index.

(3) Debt securities – 33% are allocated to long U.S. Treasury Strips, 67% are allocated to U.S. corporate bonds with an emphasis on long duration bonds rated A or better.

(4) Institutional money market fund.

The following tables present fair value measurements for the pension plan assets by major category and level of input as of:

(in thousands)	December 31, 2019			
	Fair value measurements of plan assets using:			
	Total	Level 1	Level 2	Level 3
Equity securities:				
U.S. equity securities	\$ 248,585	\$ 0	\$ 248,585	\$ 0
Non-U.S. equity securities	165,752	0	165,752	0
Total equity securities	414,337	0	414,337	0
Debt securities	482,497	0	482,497	0
Other	10,791	10,791	0	0
Total	\$ 907,625	\$ 10,791	\$ 896,834	\$ 0

(in thousands)	December 31, 2018			
	Fair value measurements of plan assets using:			
	Total	Level 1	Level 2	Level 3
Equity securities:				
U.S. equity securities	\$ 182,495	\$ 0	\$ 182,495	\$ 0
Non-U.S. equity securities	110,942	0	110,942	0
Total equity securities	293,437	0	293,437	0
Debt securities	464,613	0	464,613	0
Other	9,519	9,519	0	0
Total	\$ 767,569	\$ 9,519	\$ 758,050	\$ 0

Estimates of fair values of the pension plan assets are obtained primarily from the trustee and custodian of our pension plan. Our Level 1 category includes a money market mutual fund for which the fair value is determined using an exchange traded price provided by the trustee and custodian. Our Level 2 category includes commingled pools. Estimates of fair values for securities held by our commingled pools are obtained primarily from the trustee and custodian. Trustee and custodian valuation methodologies for Level 2 securities include multiple verifiable, observable inputs including benchmark yields, reported trades, broker/dealer quotes, issuers spreads, two-sided markets, benchmark securities, bids, offers, and reference data.

Estimated future benefit payments

The following table sets forth amounts of benefits expected to be paid over the next 10 years from our pension plans as of:

(in thousands)	
Year ending December 31,	Expected future benefit payments
2020	\$ 23,788
2021	25,903
2022	29,031
2023	32,497
2024	35,722
2025 - 2029	229,518

Employee savings plan

All full-time and regular part-time employees are eligible to participate in a traditional qualified 401(k) or a Roth 401(k) savings plan. We match 100% of the participant contributions up to 3% of compensation and 50% of participant contributions over 3% and up to 5% of compensation. Matching contributions paid to the plan were \$14.9 million in 2019, \$13.9 million in 2018, and \$12.8 million in 2017. In 2018, we made an additional discretionary employer contribution of \$5.4 million, as a way of sharing the tax savings realized from the lower corporate income tax rate that became effective January 1, 2018 with our employees. The Exchange and its subsidiaries reimbursed us for approximately 59% of the matching and discretionary contributions. Employees are permitted to invest the employer-matching contributions in our Class A common stock. Employees, other than executive and senior officers, may sell the shares at any time without restriction, provided they are in compliance with applicable insider trading laws; sales by executive and senior officers are subject to additional pre-clearance restrictions imposed by our insider trading policies. The plan acquires shares in the open market necessary to meet the obligations of the plan. Plan participants held 0.2 million shares of our Class A common stock at December 31, 2019 and 2018.

Note 11. Incentive and Deferred Compensation Plans

We have two incentive plans and two deferred compensation plans for our executives, senior vice presidents and other selected officers, and two deferred compensation plans for our outside directors.

Annual incentive plan

Our annual incentive plan ("AIP") is a bonus plan that pays cash to our executives, senior vice presidents and other selected officers annually. Participants can elect to defer up to 100% of the award under either the deferred compensation plan or the incentive compensation deferral plan. If the funding qualifier is met, plan participants are eligible to receive the incentive based upon attainment of corporate and individual performance measures, which can include various financial measures. The measures are established at the beginning of each year by the Executive Compensation and Development Committee of our Board of Directors ("ECDC"), with ultimate approval by the full Board of Directors. The corporate performance measures included the growth in direct written premium and statutory combined ratio of the Exchange and its property and casualty subsidiaries for all periods presented.

Long-term incentive plan

Our long-term incentive plan ("LTIP") is a performance based incentive plan designed to reward executives, senior vice presidents and other selected officers who can have a significant impact on our long-term performance and to further align the interests of such employees with those of our shareholders. The LTIP permits grants of performance shares or units, or phantom shares to be satisfied with shares of our Class A common stock or cash payment as determined by the ECDC. Participants can elect to defer up to 100% of the award under the incentive compensation deferral plan. The ECDC determines the form of the award to be granted at the beginning of each performance period, which is generally a three-year period. The number of shares of the Company's common stock authorized for grant under the LTIP is 1.5 million shares, with no one person able to receive more than 250,000 shares or the equivalent of \$5 million during any one performance period. We repurchase our Class A common stock on the open market to settle stock awards under the plan. We do not issue new shares of common stock to settle stock awards. LTIP awards are considered vested at the end of each applicable performance period.

The LTIP provides the recipient the right to earn performance shares or units, or phantom stock based on the level of achievement of performance goals as defined by us. Performance measures and a peer group of property and casualty companies to be used for comparison are determined by the ECDC. The performance measures for all periods presented were the reported growth in direct written premium and statutory combined ratio of the Exchange and its property and casualty subsidiaries and return on invested assets over a three-year performance period as compared to the results of the peer group over the same period. Because the award is based upon a comparison to results of a peer group over a three-year period, the award accrual is based upon estimates of probable results for the remaining performance period. This estimate is subject to variability if our results or the results of the peer group are substantially different than the results we project.

The fair value of LTIP awards is measured at each reporting date at the current share price of our Class A common stock. A liability is recorded and compensation expense is recognized ratably over the performance period.

At December 31, 2019, the plan awards for the 2017-2019 performance period, which will be granted as a cash award were fully vested. Distributions will be made in 2020 once peer group financial information becomes available. The estimated plan award based upon the peer group information as of September 30, 2019 is \$7.8 million. At December 31, 2018, the awards paid in cash for the 2016-2018 performance period were fully vested and resulted in an \$8.2 million payment to participants in June 2019. At December 31, 2017, the awards paid in cash for the 2015-2017 performance period were fully vested and resulted in a \$8.3 million payment to plan participants in June 2018. At December 31, 2016, the awards for the 2014-2016 performance period were fully vested. Participants had the option of receiving either cash or stock for the 2014-2016 awards. The cash award of \$4.7 million was paid in June 2017 and the stock award of 46,884 shares with an average share price of \$122.40 and a market value of \$5.7 million were purchased for plan participants in June 2017. The ECDC has determined that the plan awards for the 2018-2020 and 2019-2021 performance periods will be paid in cash.

The Exchange and its subsidiaries reimburse us for compensation costs of employees performing administrative services. Earned compensation costs are allocated to these entities and reimbursed to us in cash once the payout is made. The total compensation cost charged to operations related to these LTIP awards was \$7.3 million in 2019, \$6.3 million in 2018, and \$10.3 million in 2017. The related tax benefits recognized in income were \$1.5 million in 2019, \$1.3 million in 2018, and \$3.6 million in 2017. The Exchange and its subsidiaries reimburse us for approximately 47% of the annual compensation cost of these plans. At December 31, 2019, there was \$4.9 million of total unrecognized compensation cost for non-vested LTIP awards related to open performance periods. Unrecognized compensation is expected to be recognized over a period of two years.

Deferred compensation plan

Our deferred compensation plan allows executives, senior vice presidents and other selected officers to elect to defer receipt of a portion of their compensation and AIP cash awards until a later date. Employer 401(k) matching contributions that are in excess of the annual contribution or compensation limits are also credited to the participant accounts for those who elected to defer receipt of some portion of their base salary. Participants select hypothetical investment funds for their deferrals which are credited with the hypothetical returns generated.

Incentive compensation deferral plan

We have an unfunded, non-qualified incentive compensation deferral plan for participants of the AIP and LTIP. Participants can elect to defer up to 100% of their annual AIP award and/or up to 100% of their LTIP award for each performance period. Deferred awards will be credited to a deferred stock account as credits denominated in Class A shares of the Company stock until retirement or other separation from service from the Company. Participants are 100% vested at date of deferral. The shares are held in a rabbi trust, which was established to hold the shares earned under both the incentive compensation deferral plan and the deferred stock compensation plan for outside directors. The rabbi trust is classified and accounted for as equity in a manner consistent with the accounting for treasury stock. Dividends received on the shares in the rabbi trust are used to purchase additional shares. Vested share credits will be paid to participants from the rabbi trust upon separation from service in approximate equal annual installments of Class A shares for a period of three years. In 2019, the rabbi trust purchased 4,387 shares of our common stock in the open market at an average price of \$176.34 for \$0.8 million to satisfy the liability for the 2018 AIP awards deferred under the incentive compensation deferral plan. In 2018, the rabbi trust purchased 12,005 shares of our common stock in the open market at an average price of \$119.28 for \$1.4 million to satisfy the liability for the 2017 AIP awards deferred under the incentive compensation deferral plan. The total compensation charged to operations related to these deferred AIP awards was \$0.5 million in 2019, \$0.7 million in 2018, and \$1.4 million in 2017. The Exchange and its subsidiaries reimbursed us for approximately 42% of the annual compensation cost of this plan.

Deferred compensation plans for outside directors

We have a deferred compensation plan for our outside directors that allows participants to defer receipt of a portion of their annual compensation until a later date. Participants select hypothetical investment funds for their deferrals which are credited with the hypothetical returns generated.

We also have a deferred stock compensation plan for our outside directors to further align the interests of directors with those of our shareholders that provides for a portion of the directors' annual compensation in shares of our Class A common stock. Each director vests in the grant 25% every three months over the course of a year. Dividends paid by us are credited to each director's account which vest immediately. We do not issue new shares of common stock to directors. Our practice is to repurchase shares of our Class A common stock in the open market to satisfy these awards, which are held in the rabbi trust.

The rabbi trust purchased 7,370 shares of our common stock on the open market at an average price of \$194.62 for \$1.4 million in 2019, 9,285 shares at an average price of \$122.19 for \$1.1 million in 2018, and 9,663 shares at an average price of \$121.85 for \$1.2 million in 2017 to satisfy the liability of the stock compensation plan for outside directors. The shares are distributed to the outside director from the rabbi trust upon ending board service. The total compensation charged to operations related to these awards totaled \$1.1 million, \$0.8 million and \$0.9 million in 2019, 2018 and 2017, respectively.

The following table sets forth a reconciliation of beginning and ending balances of our deferred executive compensation liability as of December 31:

(in thousands)

	2019	2018	2017
Deferred executive compensation, beginning of the year	\$ 26,182	\$ 30,057	\$ 32,908
Annual incentive plan awards	2,745	4,751	6,118
Long-term incentive plan awards	7,267	6,331	10,931
Employer match and hypothetical earnings on deferred compensation	2,700	1,484	2,664
Total plan awards and earnings	12,712	12,566	19,713
Total plan awards paid	(12,852)	(14,482)	(20,621)
Compensation deferred	1,579	1,928	680
Distributions from the deferred compensation plans	(797)	(1,321)	(853)
Forfeitures ⁽¹⁾	—	—	(593)
Funding of rabbi trust for deferred stock compensation plan for outside directors	(1,434)	(1,165)	(1,177)
Funding of rabbi trust for incentive compensation deferral plan ⁽²⁾	(774)	(1,401)	—
Deferred executive compensation, end of the year	\$ 24,616	\$ 26,182	\$ 30,057

(1) Forfeitures are the result of plan participants who separated from service with the Company.

(2) The incentive compensation deferral plan was effective beginning January 1, 2017. Funding of the rabbi trust for plan payments began in 2018.

Equity compensation plan

We also have an equity compensation plan ("ECP") which is designed to reward key employees, as determined by the ECDC or the chief executive officer, who can have a significant impact on our long-term performance and to further align the interests of such employees with those of our shareholders. The ECP permits grants of restricted shares, restricted share units and other share based awards, to be satisfied with shares of our Class A common stock or cash. The ECDC determines the form of the award to be granted at the beginning of each performance period. The number of shares of the Company's Class A common stock authorized for grant under the ECP is 100,000 shares, with no one person able to receive more than 5,000 shares in a calendar year. We do not issue new shares of common stock to satisfy plan awards. Share awards are settled through the repurchase of our Class A common stock on the open market. Restricted share awards may be entitled to receive dividends payable during the performance period, or, if subject to performance goals, to receive dividend equivalents payable upon vesting. Dividend equivalents may provide for the crediting of interest or hypothetical reinvestment experience payable after expiration of the performance period. Vesting conditions are determined at the time the award is granted and may include continuation of employment for a specific period, satisfaction of performance goals and the defined performance period, and the satisfaction of any other terms and conditions as determined to be appropriate. The plan is to remain in effect until December 31, 2022, unless earlier amended or terminated by our Board of Directors.

To date, all awards have been satisfied with shares of our Class A common stock. In 2019, we purchased 3,246 Class A shares with an average share price of \$132.35 and a market value of \$0.4 million to satisfy the liability for the 2016 plan year. In 2018, we purchased 5,830 Class A shares with an average share price of \$117.39 and a market value of \$0.7 million to satisfy the liability for the 2015 plan year and remainder of 2014 plan year awards. In 2017, we purchased 3,785 shares with an average share price of \$111.55 and a market value of \$0.4 million to satisfy the liability for a portion of the 2014 plan award. The total compensation charged to operations related to these ECP awards was \$0.5 million in 2019, \$0.4 million in 2018, and \$0.2 million in 2017. The Exchange and its subsidiaries reimburse us for earned compensation costs of employees performing administrative services, which can fluctuate each year based on the plan participants. The Exchange and its subsidiaries reimbursed us for approximately 49%, 68%, and 38% of the awards paid in 2019, 2018, and 2017 respectively. Unearned compensation expense of \$0.4 million is expected to be recognized over a period of three years.

Note 12. Income Taxes

The provision for income taxes consists of the following for the years ended December 31:

(in thousands)

	2019	2018	2017
Current income tax expense	\$ 76,535	\$ 84,454	\$ 81,689
Deferred income tax expense (benefit)	3,349	(1,358)	26,912
Other income tax expense	—	—	10,095
Income tax expense	<u>\$ 79,884</u>	<u>\$ 83,096</u>	<u>\$ 118,696</u>

Other income tax expense for 2017 was impacted by the re-measurement of our deferred tax assets and liabilities due to the enactment of the Tax Cuts and Jobs Act ("TCJA") which reduced the corporate tax rate from 35% to 21% effective January 1, 2018. The current and deferred income tax expense (benefit) for 2019 and 2018 is measured at the statutory rate of 21%, and 35% for 2017.

A reconciliation of the provision for income taxes, with amounts determined by applying the statutory federal income tax rate to pre-tax income, is as follows for the years ended December 31:

(in thousands)

	2019	2018	2017
Income tax at statutory rate	\$ 83,308	\$ 77,977	\$ 110,493
Change in tax rate ⁽¹⁾	—	—	10,095
Tax-exempt interest	(123)	(1,305)	(2,278)
(Decrease) increase in unrecognized tax benefits	(3,088)	3,088	—
Other, net	(213)	3,336	386
Income tax expense	<u>\$ 79,884</u>	<u>\$ 83,096</u>	<u>\$ 118,696</u>

(1) The change in tax rate represents the tax effect of the re-measurement of deferred tax assets and liabilities due to the enactment of the TCJA.

The statutory rate for the years ended December 31, 2019 and 2018 is 21%, and 35% for the year ended December 31, 2017.

Temporary differences and carry-forwards, which give rise to deferred tax assets and liabilities, are as follows for the years ended December 31:

(in thousands)

	2019	2018
Deferred tax assets:		
Pension and other postretirement benefits	\$ 25,720	\$ 20,124
Other employee benefits	11,835	12,237
Deferred revenue	3,755	3,524
Allowance for management fee returned on cancelled policies	3,421	3,292
Unrealized losses on investments	0	2,030
Other	1,663	1,246
Total deferred tax assets	46,394	42,453
Deferred tax liabilities:		
Depreciation	19,454	13,015
Prepaid expenses	4,890	1,376
Limited partnerships	2,632	2,534
Unrealized gains on investments	1,549	0
Commissions	545	1,270
Other	138	157
Total deferred tax liabilities	29,208	18,352
Net deferred tax asset	\$ 17,186	\$ 24,101

If we determine that any of our deferred tax assets will not result in future tax benefits, a valuation allowance must be established for the portion of the assets that are not expected to be realized. We had no valuation allowance recorded at December 31, 2019 or 2018.

A reconciliation of unrecognized tax benefits for the years ended December 31 is as follows:

(in thousands)

	2019	2018	2017
Balance at the beginning of the year	\$ 3,088	\$ 0	\$ —
Additions for current year tax positions	—	7,719	—
Reductions for current year tax positions	—	(4,631)	—
Additions for prior year tax positions	4,631	—	2,337
Reductions for prior year tax positions	(7,719)	—	(2,337)
Balance at the end of the year	\$ 0	\$ 3,088	\$ 0

The uncertain tax position including \$3.1 million of tax expense and \$0.9 million of interest expense recorded in 2018 was settled during 2019. This settlement reduced our effective tax rate by 1.0% in 2019. The amounts recorded in 2018 resulted from the difference in measuring the tax liability at the previous tax rate and the current enacted tax rate. The recording of the uncertain tax position and related interest expense increased our 2018 effective tax rate by 1.0%. In 2017, we had an uncertain tax position of \$2.3 million and related interest expense recorded was \$0.1 million. As a related temporary tax difference was recognized, there was no impact to our results of operations or financial position.

Tax years ending December 31, 2018, 2017 and 2016 remain open to IRS examination. We are not currently under IRS audit, nor have we been notified of an upcoming IRS audit.

We are the attorney-in-fact for the subscribers (policyholders) at the Exchange, a reciprocal insurance exchange. In that capacity, we provide all services and facilities necessary to conduct the Exchange's insurance business. Indemnity and the Exchange together constitute a single insurance business. Consequently, we are not subject to state corporate income or franchise taxes in states where the Exchange conducts its business and the states collect premium tax in lieu of corporate income or franchise tax, as a result of the Exchange's remittance of premium taxes in those states.

Note 13. Capital StockClass A and B common stock

We have two classes of common stock: Class A which has a dividend preference and Class B which has voting power and a conversion right. Each share of Class A common stock outstanding at the time of the declaration of any dividend upon shares of Class B common stock shall be entitled to a dividend payable at the same time, at the same record date, and in an amount at least equal to 2/3 of 1.0% of any dividend declared on each share of Class B common stock. We may declare and pay a dividend in respect to Class A common stock without any requirement that any dividend be declared and paid in respect to Class B common stock. Sole shareholder voting power is vested in Class B common stock except insofar as any applicable law shall permit Class A common shareholders to vote as a class in regards to any changes in the rights, preferences, and privileges attaching to Class A common stock. Holders of Class B shares may, at their option, convert their shares into Class A shares at the rate of 2,400 Class A shares per Class B share. There were no shares of Class B common stock converted into Class A common stock in 2019, 2018 or 2017.

Stock repurchases

Our Board of Directors authorized a stock repurchase program effective January 1, 1999 allowing the repurchase of our outstanding Class A nonvoting common stock. In 2011, our Board of Directors approved a continuation of the current stock repurchase program for a total of \$150 million, with no time limitation. Treasury shares are recorded in the Statements of Financial Position at total cost based upon trade date. There were no shares repurchased under this program during 2019, 2018 or 2017. We had approximately \$17.8 million of repurchase authority remaining under this program at December 31, 2019, based upon trade date.

We made stock repurchases in 2019, 2018, and 2017 outside of our publicly announced share repurchase program related to stock-based awards. See Note 11, "Incentive and Deferred Compensation Plans" for additional information.

Note 14. Accumulated Other Comprehensive Income (Loss)

Changes in accumulated other comprehensive income ("AOCI") (loss) by component, including amounts reclassified to other comprehensive income ("OCI") (loss) and the related line item in the Statements of Operations where net income is presented, are as follows for the year ended December 31:

(in thousands)	2019			2018			2017		
	Before Tax	Income Tax ⁽¹⁾	Net	Before Tax	Income Tax ⁽¹⁾	Net	Before Tax	Income Tax ⁽¹⁾	Net
Investment securities:									
AOCI (loss), beginning of year	\$ (9,169)	\$ (1,926)	\$ (7,243)	\$ 3,410	\$ 716	\$ 2,694	\$ 3,954	\$ 1,384	\$ 2,570
OCI (loss) before reclassifications - pre TCJA ⁽¹⁾	—	—	—	—	—	—	(648)	(227)	(421)
OCI (loss) before reclassifications - post TCJA ⁽¹⁾	19,257	4,044	15,213	(15,372)	(3,228)	(12,144)	1,162	243	919
Realized investment (gains) losses	(4,619)	(970)	(3,649)	1,297	272	1,025	(1,240)	(434)	(806)
Impairment losses	195	41	154	1,581	332	1,249	182	64	118
Cumulative effect of adopting ASU 2016-01 ⁽²⁾	—	—	—	(85)	(18)	(67)	—	—	—
OCI (loss)	14,833	3,115	11,718	(12,579)	(2,642)	(9,937)	(544)	(354)	(190)
Reclassification adjustment ⁽³⁾	—	—	—	—	—	—	—	(314)	314
AOCI (loss), end of year	\$ 5,664	\$ 1,189	\$ 4,475	\$ (9,169)	\$ (1,926)	\$ (7,243)	\$ 3,410	\$ 716	\$ 2,694
Pension and other postretirement plans:									
AOCI (loss), beginning of year	\$ (155,749)	\$ (32,708)	\$ (123,041)	\$ (200,954)	\$ (42,201)	\$ (158,753)	\$ (190,695)	\$ (66,744)	\$ (123,951)
OCI (loss) before reclassifications	(4,085)	(858)	(3,227)	31,401	6,594	24,807	(20,314)	(7,111)	(13,203)
Amortization of prior service costs ⁽⁴⁾	1,394	293	1,101	1,353	284	1,069	871	306	565
Amortization of net actuarial loss ⁽⁴⁾	4,840	1,016	3,824	12,451	2,615	9,836	8,882	3,109	5,773
Settlement loss ⁽⁴⁾	—	—	—	—	—	—	302	106	196
Impact of change in tax rate ⁽⁵⁾	—	—	—	—	—	—	—	1,436	(1,436)
OCI (loss)	2,149	451	1,698	45,205	9,493	35,712	(10,259)	(2,154)	(8,105)
Reclassification adjustment ⁽³⁾	—	—	—	—	—	—	—	26,697	(26,697)
AOCI (loss), end of year	\$ (153,600)	\$ (32,257)	\$ (121,343)	\$ (155,749)	\$ (32,708)	\$ (123,041)	\$ (200,954)	\$ (42,201)	\$ (158,753)
Total									
AOCI (loss), beginning of year	\$ (164,918)	\$ (34,634)	\$ (130,284)	\$ (197,544)	\$ (41,485)	\$ (156,059)	\$ (186,741)	\$ (65,360)	\$ (121,381)
Investment securities	14,833	3,115	11,718	(12,579)	(2,642)	(9,937)	(544)	(354)	(190)
Pension and other postretirement plans	2,149	451	1,698	45,205	9,493	35,712	(10,259)	(2,154)	(8,105)
OCI (loss)	16,982	3,566	13,416	32,626	6,851	25,775	(10,803)	(2,508)	(8,295)
Reclassification adjustment ⁽³⁾	—	—	—	—	—	—	—	26,383	(26,383)
AOCI (loss), end of year	\$ (147,936)	\$ (31,068)	\$ (116,868)	\$ (164,918)	\$ (34,634)	\$ (130,284)	\$ (197,544)	\$ (41,485)	\$ (156,059)

(1) Deferred taxes related to unrealized gains and losses for the period from December 23, 2017 through December 31, 2019 were recognized at the 21% corporate rate following enactment of the TCJA. Prior to enactment, they were recognized at the 35% corporate rate.

(2) A reclassification of unrealized losses of equity securities from AOCI (loss) to retained earnings was required at January 1, 2018 as a result of new accounting guidance.

(3) A one-time adjustment was made in 2017 to reclassify stranded tax effects of the components of AOCI (loss) resulting from enactment of TCJA from AOCI (loss) to retained earnings. See Note 2, "Significant Accounting Policies".

(4) These components of AOCI (loss) are included in the computation of net periodic pension cost. See Note 10, "Postretirement Benefits", for additional information.

(5) Deferred taxes related to the December 31, 2017 portion of the pension and other postretirement component recognized in AOCI (loss) of \$10.3 million were recognized at the 21% corporate rate following the enactment of the TCJA.

Note 15. Related Party**Management fee**

A management fee is charged to the Exchange for services we provide under the subscriber's agreement with subscribers at the Exchange. The fee is a percentage of direct and affiliated assumed premiums written by the Exchange. This percentage rate is determined at least annually by our Board of Directors but cannot exceed 25%. The effective management fee rate charged the Exchange was 25% in 2019, 2018 and 2017. The Board of Directors elected to maintain the fee at 25% beginning January 1, 2020.

There is no provision in the subscriber's agreement for termination of our appointment as attorney-in-fact by the subscribers at the Exchange and the appointment is not affected by a policyholder's disability or incapacity.

Insurance holding company system

Most states have enacted legislation that regulates insurance holding company systems, defined as two or more affiliated persons, one or more of which is an insurer. The Exchange has the following wholly owned property and casualty subsidiaries: Erie Insurance Company, Erie Insurance Company of New York, Erie Insurance Property & Casualty Company and Flagship City Insurance Company, and a wholly owned life insurance company, Erie Family Life Insurance Company. Indemnity and the Exchange, and its wholly owned subsidiaries, meet the definition of an insurance holding company system.

All transactions within a holding company system affecting the member insurers of the holding company system must be fair and reasonable and any charges or fees for services performed must be reasonable. Approval by the applicable insurance commissioner is required prior to the consummation of transactions affecting the members within a holding company system.

Office leases

We lease the home office from the Exchange. See Note 8, "Leases". Lease expense totaled \$6.1 million, \$6.0 million, and \$5.9 million in 2019, 2018, and 2017, respectively. Operating expenses, including utilities, cleaning, repairs, real estate taxes, and property insurance, totaled \$16.7 million, \$13.5 million, and \$12.2 million in 2019, 2018, and 2017, respectively. The Exchange and its subsidiaries reimburse us for rent costs and related operating expenses of shared facilities used to perform administrative services, which are allocated based upon usage or square footage occupied. Reimbursements related to the use of this space totaled \$4.2 million, \$3.9 million, and \$4.0 million in 2019, 2018, and 2017, respectively. We also had a lease commitment with EFL for a field office until 2018. Annual rentals paid to EFL under this lease totaled \$0.4 million in both 2018 and 2017.

We previously owned three field offices for which rental costs of shared facilities were allocated based upon usage or square footage occupied. In 2018, we sold the three field offices to the Exchange. See Note 7, "Fixed Assets".

Notes receivable from EFL

We previously held a \$25 million surplus note issued to us by EFL that was payable on demand on or after December 31, 2018. In 2018, EFL, with the appropriate approval from the Pennsylvania Insurance Commissioner, satisfied its obligation and repaid the surplus note. EFL paid related interest to us of \$1.6 million and \$1.7 million in 2018 and 2017, respectively.

Note 16. Concentrations of Credit Risk

Financial instruments that could potentially expose us to concentrations of credit risk include our unsecured receivables from the Exchange. A large majority of our revenue and receivables are from the Exchange and its affiliates. See also Note 1, "Nature of Operations". Management fee amounts and other reimbursements due from the Exchange and its affiliates were \$468.6 million and \$449.9 million at December 31, 2019 and 2018, respectively. Given the financial strength of the Exchange and historical experience of no credit losses, we believe it is unlikely these receivables have a significant credit loss exposure.

Note 17. Commitments and Contingencies

We are involved in litigation arising in the ordinary course of conducting business. In accordance with current accounting standards for loss contingencies and based upon information currently known to us, we establish reserves for litigation when it is probable that a loss associated with a claim or proceeding has been incurred and the amount of the loss or range of loss can be reasonably estimated. When no amount within the range of loss is a better estimate than any other amount, we accrue the minimum amount of the estimable loss. To the extent that such litigation against us may have an exposure to a loss in excess of the amount we have accrued, we believe that such excess would not be material to our financial condition, results of operations, or cash flows. Legal fees are expensed as incurred. We believe that our accruals for legal proceedings are appropriate and, individually and in the aggregate, are not expected to be material to our financial condition, results of operations, or cash flows.

We review all litigation on an ongoing basis when making accrual and disclosure decisions. For certain legal proceedings, we cannot reasonably estimate losses or a range of loss, if any, particularly for proceedings that are in their early stages of development or where the plaintiffs seek indeterminate damages. Various factors, including, but not limited to, the outcome of potentially lengthy discovery and the resolution of important factual questions, may need to be determined before probability can be established or before a loss or range of loss can be reasonably estimated. If the loss contingency in question is not both probable and reasonably estimable, we do not establish an accrual and the matter will continue to be monitored for any developments that would make the loss contingency both probable and reasonably estimable. In the event that a legal proceeding results in a substantial judgment against, or settlement by, us, there can be no assurance that any resulting liability or financial commitment would not have a material adverse effect on our financial condition, results of operations, or cash flows.

Note 18. Supplementary Data on Cash Flows

A reconciliation of net income to net cash provided by operating activities as presented in the Statements of Cash Flows is as follows for the years ended December 31:

<i>(in thousands)</i>	2019	2018	2017
Cash flows from operating activities:			
Net income	\$ 316,821	\$ 288,224	\$ 196,999
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	16,813	13,368	14,831
Deferred income tax expense (benefit)	3,349	(1,358)	26,912
Other income tax expense ⁽¹⁾	—	—	10,095
Lease amortization expense	13,959	—	—
Realized (gains) losses and impairments on investments	(5,908)	3,591	(1,152)
Equity in (earnings) losses of limited partnerships	(660)	822	(2,801)
Loss (gain) on disposal of fixed assets	75	(3,047)	98
Net amortization of bond premium	1,203	5,601	7,038
Decrease in deferred compensation	(1,541)	(3,886)	(2,681)
Limited partnership distributions	1,931	7,173	5,128
Increase in receivables from affiliates	(19,505)	(30,804)	(39,788)
(Increase) decrease in accrued investment income	(170)	1,590	(516)
Decrease (increase) in federal income taxes recoverable	7,700	21,738	(24,640)
Decrease (increase) in prepaid pension	28,798	(47,335)	(27,265)
Increase in prepaid expenses and other assets	(11,338)	(727)	(7,636)
(Decrease) increase in accounts payable and accrued expenses	(3,627)	11,039	17,183
Increase in commissions payable	21,390	13,449	17,565
(Decrease) increase in accrued agent bonuses	(7,409)	(19,066)	7,756
Increase in contract liability	2,646	3,213	—
Net cash provided by operating activities	<u>\$ 364,527</u>	<u>\$ 263,585</u>	<u>\$ 197,126</u>

(1) Other income tax expense for 2017 was impacted by the re-measurement of our deferred tax assets and liabilities due to the enactment of the TCJA on December 22, 2017, which reduced the corporate tax rate from 35% to 21% effective January 1, 2018.

Note 19. Quarterly Results of Operations (unaudited)

	Year ended December 31, 2019				
	First quarter	Second quarter	Third quarter	Fourth quarter	Year
(in thousands, except per share data)					
Operating revenue	\$ 594,106	\$ 647,710	\$ 638,742	\$ 596,740	\$ 2,477,298
Operating expenses	507,984	551,100	532,835	528,040	2,119,959
Investment income	9,795	9,652	13,606	6,914	39,967
Interest expense and other (income), net	402	224	11	(36)	601
Income before income taxes	95,515	106,038	119,502	75,650	396,705
Net income	\$ 75,311	\$ 87,754	\$ 94,169	\$ 59,587	\$ 316,821

Earnings per share ⁽¹⁾
Net income per share

Class A common stock – basic	\$ 1.62	\$ 1.88	\$ 2.02	\$ 1.28	\$ 6.80
Class A common stock – diluted	\$ 1.44	\$ 1.68	\$ 1.80	\$ 1.14	\$ 6.06
Class B common stock – basic and diluted	\$ 243	\$ 283	\$ 303	\$ 192	\$ 1,020

(1) The cumulative sum of quarterly basic and diluted net income per share amounts may not equal total basic and diluted net income per share for the year due to differences in weighted average shares and equivalent shares outstanding for each of the periods presented.

	Year ended December 31, 2018				
	First quarter	Second quarter	Third quarter	Fourth quarter	Year
(in thousands, except per share data)					
Operating revenue	\$ 572,160	\$ 621,458	\$ 612,126	\$ 576,468	\$ 2,382,212
Operating expenses	494,593	526,135	515,431	501,710	2,037,869
Investment income	6,163	6,207	8,431	4,995	25,796
Interest expense and other (income), net ⁽¹⁾	509	544	655	(2,889)	(1,181)
Income before income taxes	83,221	100,986	104,471	82,642	371,320
Net income	\$ 65,758	\$ 79,706	\$ 80,446	\$ 62,314	\$ 288,224

Earnings per share ⁽²⁾
Net income per share

Class A common stock – basic	\$ 1.41	\$ 1.71	\$ 1.73	\$ 1.34	\$ 6.19
Class A common stock – diluted	\$ 1.26	\$ 1.52	\$ 1.54	\$ 1.19	\$ 5.51
Class B common stock – basic and diluted	\$ 212	\$ 257	\$ 259	\$ 201	\$ 928

(1) The decrease in interest expense and other (income), net in the fourth quarter is driven by the \$3.4 million gain recognized on the sale of the field offices we owned to Exchange. See Note 7, "Fixed Assets".

(2) The cumulative sum of quarterly basic and diluted net income per share amounts may not equal total basic and diluted net income per share for the year due to differences in weighted average shares and equivalent shares outstanding for each of the periods presented.

Note 20. Subsequent Events

No items were identified in this period subsequent to the financial statement date that required adjustment or additional disclosure.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURESEvaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures designed to ensure that information required to be disclosed in our reports filed under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission rules and forms, and that such information is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow for timely decisions regarding required disclosures.

As required by the Securities and Exchange Commission Rule 13a-15(e), we carried out an evaluation, under the supervision and with the participation of management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures as of December 31, 2019. Based upon the foregoing, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective.

Changes in Internal Control over Financial Reporting

There has been no change in our internal controls over financial reporting during our most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect our internal controls over financial reporting. Our process for evaluating controls and procedures is continuous and encompasses constant improvement of the design and effectiveness of established controls and procedures.

Management's Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting of Erie Indemnity Company, as defined in Rules 13a-15(f) under the Exchange Act. Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of the Erie Indemnity Company's internal control over financial reporting based upon the framework in the *Internal Control-Integrated Framework* issued in 2013 by the Committee of Sponsoring Organizations of the Treadway Commission. Based upon our evaluation under the framework in the *Internal Control-Integrated Framework* issued in 2013, management has concluded that Erie Indemnity Company's internal control over financial reporting was effective as of December 31, 2019.

/s/ Timothy G. NeCastro

Timothy G. NeCastro

President and

Chief Executive Officer

February 27, 2020

/s/ Gregory J. Gutting

Gregory J. Gutting

Executive Vice President

and Chief Financial Officer

February 27, 2020

/s/ Julie M. Pelkowski

Julie M. Pelkowski

Senior Vice President

and Controller

February 27, 2020

Our independent auditor, Ernst & Young LLP, a registered public accounting firm, has issued an attestation report on our internal control over financial reporting. This report appears on the following page.

ITEM 9B. OTHER INFORMATION

There was no additional information in the fourth quarter of 2019 that has not already been filed in a Form 8-K.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Erie Indemnity Company

Opinion on Internal Control over Financial Reporting

We have audited Erie Indemnity Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Erie Indemnity Company (the "Company") maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the statements of financial position of the Company as of December 31, 2019 and 2018, and the related statements of operations, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the "financial statements") of the Company and our report dated February 27, 2020 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

Cleveland, OH
February 27, 2020

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information with respect to our outside directors, audit committee and audit committee financial experts and Section 16(a) beneficial ownership reporting compliance, is incorporated herein by reference to the information statement on Schedule 14C to be filed with the Securities and Exchange Commission no later than 120 days after December 31, 2019.

We have adopted a Code of Conduct that applies to all of our outside directors, officers and employees. We have previously filed a copy of the Code of Conduct as Exhibit 14.3 to the Registrant's Form 10-K filed with the Securities and Exchange Commission on February 25, 2016. In addition to this, we have adopted a Code of Ethics for Senior Financial Officers that also applies to our Chief Executive Officer, Chief Financial Officer, Chief Accounting Officer and any other person performing similar functions. We have previously filed a copy of the Code of Ethics for Senior Financial Officers as Exhibit 14.4 to the Registrant's Form 8-K filed with the Securities and Exchange Commission on June 1, 2016. Our Code of Conduct and Code of Ethics for Senior Financial Officers are also available on our website at www.erieinsurance.com.

Executive Officers of the Registrant

Name	Age as of 12/31/2019	Principal Occupation and Positions for Past Five Years
<u>President & Chief Executive Officer:</u>		
Timothy G. NeCastro	59	President and Chief Executive Officer since January 2017; Chief Executive Officer, August 2016 through December 2016; President and Chief Executive Officer Designate, June 2016 through July 2016; Senior Vice President, West Region, February 2010 through June 2016; Director, Erie Family Life Insurance Company ("EFL"), Erie Insurance Company ("EIC"), Flagship City Insurance Company ("Flagship"), Erie Insurance Company of New York ("ENY") and Erie Insurance Property & Casualty Company ("EPC").
<u>Executive Vice Presidents:</u>		
Lorianne Feltz	50	Executive Vice President, Claims & Customer Service since November 2016; Senior Vice President, Customer Service, January 2011 through November 2016.
Gregory J. Gutting	56	Executive Vice President and Chief Financial Officer since August 2016; Interim Executive Vice President and Chief Financial Officer, October 2015 through July 2016; Senior Vice President and Controller, March 2009 through September 2015; Director, EFL, EIC, Flagship, ENY and EPC.
Robert C. Ingram, III	61	Executive Vice President and Chief Information Officer since August 2012; Director, EFL, EIC, Flagship, ENY and EPC.
Douglas E. Smith	45	Executive Vice President, Sales & Products since November 2016; Senior Vice President, Personal Lines, November 2008 through October 2016.
Dionne Wallace Oakley	52	Executive Vice President, Human Resources & Strategy since January 2018; Senior Vice President, Human Resources, September 2012 through December 2017.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item with respect to executive compensation is incorporated by reference to the information statement on Schedule 14C to be filed with the Securities and Exchange Commission no later than 120 days after December 31, 2019.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information with respect to security ownership of certain beneficial owners and management and securities authorized for issuance under equity compensation plans, is incorporated by reference to the information statement on Schedule 14C to be filed with the Securities and Exchange Commission no later than 120 days after December 31, 2019.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information with respect to certain relationships with our outside directors is incorporated by reference to the information statement on Schedule 14C to be filed with the Securities and Exchange Commission no later than 120 days after December 31, 2019.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item is incorporated by reference to the information statement on Schedule 14C to be filed with the Securities and Exchange Commission no later than 120 days after December 31, 2019.

PART IV**ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES**

(a) The following documents are filed as part of this report:

1. Financial Statements

Included in Item 8 "Financial Statements and Supplementary Data" contained in this report.

Erie Indemnity Company:

- Report of Independent Registered Public Accounting Firm on the Effectiveness of Internal Control over Financial Reporting
- Report of Independent Registered Public Accounting Firm on the Financial Statements
- Statements of Operations for the three years ended December 31, 2019, 2018 and 2017
- Statements of Comprehensive Income for the three years ended December 31, 2019, 2018 and 2017
- Statements of Financial Position as of December 31, 2019 and 2018
- Statements of Shareholders' Equity for the three years ended December 31, 2019, 2018 and 2017
- Statements of Cash Flows for the three years ended December 31, 2019, 2018 and 2017
- Notes to Financial Statements

2. Financial Statement Schedules

All schedules are not required, not applicable, or the information is included in the financial statements or notes thereto.

3. Exhibit Index

Page
[86](#)

ITEM 16. FORM 10-K SUMMARY

None.

EXHIBIT INDEX

(Pursuant to Item 601 of Regulation S-K)

Exhibit Number	Description of Exhibit
3.8	<u>Amended and Restated Articles of Incorporation of Registrant dated April 19, 2011. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-Q that was filed with the Commission on August 2, 2011.</u>
3.10	<u>Erie Indemnity Company Amended and Restated Bylaws dated April 30, 2019. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 8-K that was filed with the Commission on May 3, 2019.</u>
4.1*	<u>Erie Indemnity Company Description of Capital Stock</u>
10.12	<u>Form of Subscriber's Agreement whereby policyholders of Erie Insurance Exchange appoint Registrant as their Attorney-in-Fact. Such exhibit is incorporated by reference to the like titled but renumbered exhibit in the Registrant's Form 10-Q that was filed with the Securities and Exchange Commission on November 6, 2002.</u>
10.104	<u>Deferred Compensation Plan of Erie Indemnity Company (As Amended and Restated as of January 1, 2009). Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-K that was filed with the Commission on February 26, 2009.</u>
10.145	<u>Erie Indemnity Company Equity Compensation Plan (incorporated by reference to Appendix A to the Registrant's Information Statement for the 2013 Annual Meeting of Shareholders filed with the Commission on March 18, 2013).</u>
10.153	<u>Erie Indemnity Company Long-Term Incentive Plan (As Amended and Restated Effective as of January 1, 2014). Such exhibit is incorporated by reference to Appendix B to the Registrant's Information Statement for the 2014 Annual Meeting of Shareholders filed with the Commission on March 14, 2014.</u>
10.154	<u>First Amendment to Erie Indemnity Company Equity Compensation Plan effective January 1, 2014, dated March 10, 2014. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-Q that was filed with the Commission on May 1, 2014.</u>
10.156	<u>Form of Indemnification Agreement by and between Erie Indemnity Company and each Director and Executive Officer of Erie Indemnity Company. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-K that was filed with the Commission on February 26, 2009.</u>
10.157	<u>First Amendment to Erie Indemnity Company Long-Term Incentive Plan (As Amended and Restated Effective as of January 1, 2014), dated March 25, 2015. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-Q that was filed with the Commission on April 30, 2015.</u>
10.158	<u>Erie Indemnity Company Deferred Compensation Plan for Outside Directors (As Amended and Restated as of July 29, 2015), dated October 20, 2015. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-K that was filed with the Commission on February 25, 2016.</u>
10.159	<u>Erie Indemnity Company Deferred Stock Plan for Outside Directors (As of July 29, 2015), dated October 20, 2015. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-K that was filed with the Commission on February 25, 2016.</u>
10.162	<u>Erie Insurance Group Retirement Plan for Employees (As Amended and Restated Effective December 31, 2014), dated December 18, 2015. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-K that was filed with the Commission on February 25, 2016.</u>
10.163	<u>Erie Insurance Group Employee Savings Plan (As Amended and Restated Effective as of January 1, 2015), dated December 18, 2015. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-K that was filed with the Commission on February 25, 2016.</u>
10.166	<u>First Amendment to Erie Indemnity Company Deferred Stock Plan for Outside Directors (As Amended and Restated as of July 29, 2015), dated March 31, 2016. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-Q that was filed with the Commission on April 28, 2016.</u>
10.169	<u>First Amendment to Erie Insurance Group Retirement Plan for Employees (As Amended and Restated Effective December 31, 2014), dated September 12, 2016. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-Q that was filed with the Commission on October 27, 2016.</u>

<u>Exhibit Number</u>	<u>Description of Exhibit</u>
10.170	<u>Second Amendment to Erie Insurance Group Retirement Plan for Employees (As Amended and Restated Effective December 31, 2014), dated September 12, 2016. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-Q that was filed with the Commission on October 27, 2016.</u>
10.171	<u>First Amendment to Erie Insurance Group Employee Savings Plan (As Amended and Restated Effective as of January 1, 2015), dated September 12, 2016. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-Q that was filed with the Commission on October 27, 2016.</u>
10.173	<u>Second Amendment to Erie Indemnity Company Long-Term Incentive Plan (As Amended and Restated Effective as of January 1, 2014), dated August 1, 2016. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-Q that was filed with the Commission on October 27, 2016.</u>
10.174	<u>Credit Agreement by and among Erie Indemnity Company and PNC Bank, National Association, dated as of November 7, 2016. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 8-K that was filed with the Commission on November 14, 2016.</u>
10.175	<u>Pledge Agreement made by Erie Indemnity Company in favor of PNC Bank, National Association, dated as of November 7, 2016. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 8-K that was filed with the Commission on November 14, 2016.</u>
10.177	<u>Erie Indemnity Company Incentive Compensation Deferral Plan (Effective January 1, 2017), dated December 7, 2016. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-K that was filed with the Commission on February 23, 2017.</u>
10.178	<u>Third Amendment to Erie Insurance Group Retirement Plan for Employees (As Amended and Restated Effective December 31, 2014), dated December 22, 2016. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-K that was filed with the Commission on February 23, 2017.</u>
10.179	<u>Lease Agreement between Erie Insurance Exchange and Erie Indemnity Company effective January 1, 2017. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-Q that was filed with the Commission on May 1, 2017.</u>
10.180	<u>AIA Document A133 - 2009, Standard Form of Agreement Between Owner and Construction Manager as Constructor, dated as of February 27, 2015, between Erie Insurance Exchange and P.J. Dick, Inc. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-Q that was filed with the Commission on July 27, 2017.</u>
10.181	<u>Assignment Agreement, dated as of January 16, 2017, between Erie Insurance Exchange and Erie Indemnity Company. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-Q that was filed with the Commission on July 27, 2017.</u>
10.182	<u>AIA Document A133 - 2009 Exhibit A, Guaranteed Maximum Price Amendment, dated as of July 10, 2017, between Erie Indemnity Company and P.J. Dick, Inc. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-Q that was filed with the Commission on July 27, 2017.</u>
10.183	<u>Second Amendment to Erie Insurance Group Employee Savings Plan (As Amended and Restated Effective January 1, 2015), dated October 17, 2017. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-Q that was filed with the Commission on October 26, 2017.</u>
10.184	<u>Amended Appendix A (Building List) to Lease Agreement between Erie Insurance Exchange and Erie Indemnity Company effective January 1, 2017, dated October 25, 2017. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-Q that was filed with the Commission on October 26, 2017.</u>
10.185	<u>Third Amendment to Erie Insurance Group Employee Savings Plan (As Amended and Restated Effective January 1, 2015), dated December 20, 2017. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-K that was filed with the Commission on February 22, 2018.</u>
10.186	<u>Fourth Amendment to Erie Insurance Group Retirement Plan for Employees (As Amended and Restated Effective December 31, 2014), dated December 20, 2017. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-K that was filed with the Commission on February 22, 2018.</u>
10.187	<u>First Amendment to Credit Agreement by and between Erie Indemnity Company and PNC Bank, National Association, dated as of December 13, 2016. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 8-K that was filed with the Commission on January 24, 2018.</u>

Exhibit Number	Description of Exhibit
10.188	Second Amendment to Credit Agreement by and between Erie Indemnity Company and PNC Bank, National Association, dated as of January 22, 2018. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 8-K that was filed with the Commission on January 24, 2018.
10.190	Fourth Amendment to Erie Insurance Group Employee Savings Plan (As Amended and Restated Effective January 1, 2015), dated May 2, 2018. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-Q that was filed with the Commission on July 26, 2018.
10.192	Second Amended and Restated Credit Agreement among JPMorgan Chase Bank, National Association, as Administrative Agent; the Lenders named therein; and Erie Indemnity Company, dated October 30, 2018. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 8-K that was filed with the Commission on November 2, 2018.
10.193	Third Amendment to Credit Agreement by and between Erie Indemnity Company and PNC Bank, National Association, dated as of November 13, 2018. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 8-K that was filed with the Commission on November 14, 2018.
10.194	Fifth Amendment to Erie Insurance Group Retirement Plan for Employees (As Amended and Restated Effective December 31, 2014), dated December 20, 2018. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-K that was filed with the Commission on February 21, 2019.
10.195	Fifth Amendment to Erie Insurance Group Employee Savings Plan (As Amended and Restated Effective January 1, 2015), dated March 29, 2019. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-Q that was filed with the Commission on May 2, 2019.
10.196	First Amendment to Erie Indemnity Company Incentive Compensation Deferral Plan (Effective January 1, 2017), dated July 1, 2019. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-Q that was filed with the Commission on July 25, 2019.
10.197	Appendix B to Deferred Compensation Plan of Erie Indemnity Company (As Amended and Restated Effective as of January 1, 2019). Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-Q that was filed with the Commission on July 25, 2019.
10.198	Sixth Amendment to Erie Insurance Group Retirement Plan for Employees (As Amended and Restated Effective December 31, 2014), dated September 3, 2019. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-Q that was filed with the Commission on October 24, 2019.
10.199*	Seventh Amendment to Erie Insurance Group Retirement Plan for Employees (As Amended and Restated Effective December 31, 2014), dated December 23, 2019.
10.200*	Eighth Amendment to Erie Insurance Group Retirement Plan for Employees (As Amended and Restated Effective December 31, 2014), dated December 23, 2019.
10.201*	Ninth Amendment to Erie Insurance Group Retirement Plan for Employees (As Amended and Restated Effective December 31, 2014), dated December 23, 2019.
10.202*	Sixth Amendment to Erie Insurance Group Employee Savings Plan (As Amended and Restated Effective January 1, 2015), dated December 23, 2019.
10.203*	Seventh Amendment to Erie Insurance Group Employee Savings Plan (As Amended and Restated Effective January 1, 2015), dated December 23, 2019.
10.204*	Erie Indemnity Company Annual Incentive Plan effective January 1, 2020.
14.3	Code of Conduct. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 10-K that was filed with the Commission on February 25, 2016.
14.4	Code of Ethics for Senior Financial Officers. Such exhibit is incorporated by reference to the like titled exhibit in the Registrant's Form 8-K that was filed with the Commission on June 1, 2016.
23*	Consent of Independent Registered Public Accounting Firm.
31.1*	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32*	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

Exhibit	
<u>Number</u>	<u>Description of Exhibit</u>
101.INS*	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH*	Inline XBRL Taxonomy Extension Schema Document.
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104*	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).
* Filed herewith.	

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

February 27, 2020

ERIE INDEMNITY COMPANY

(Registrant)

By:

/s/ Timothy G. NeCastro

Timothy G. NeCastro, President and CEO

(Principal Executive Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the date indicated.

February 27, 2020

/s/ Timothy G. NeCastro

Timothy G. NeCastro, President and CEO

(Principal Executive Officer)

/s/ Gregory J. Gutting

Gregory J. Gutting, Executive Vice President and CFO

(Principal Financial Officer)

/s/ Julie M. Pelkowski

Julie M. Pelkowski, Senior Vice President and Controller

(Principal Accounting Officer)

Board of Directors:

/s/ J. Ralph Borneman, Jr.

J. Ralph Borneman, Jr.

/s/ C. Scott Hartz

C. Scott Hartz

/s/ Eugene C. Connell

Eugene C. Connell

/s/ Brian A. Hudson, Sr.

Brian A. Hudson, Sr.

/s/ Salvatore Correnti

Salvatore Correnti

/s/ George R. Lucore

George R. Lucore

/s/ LuAnn Datesh

LuAnn Datesh

/s/ Thomas W. Palmer

Thomas W. Palmer

/s/ Jonathan Hirt Hagen

Jonathan Hirt Hagen

/s/ Martin P. Sheffield

Martin P. Sheffield

/s/ Thomas B. Hagen

Thomas B. Hagen, Chairman

/s/ Elizabeth Hirt Vorsheck

Elizabeth Hirt Vorsheck

ERIE INDEMNITY COMPANY
DESCRIPTION OF CAPITAL STOCK

The following summary of the rights of our Class A common stock, stated value \$0.0292 per share ("Class A Common Stock") and Class B common stock, stated value \$70.00 per share ("Class B Common Stock") does not purport to be complete. This summary is subject to and qualified by the provisions of our Amended and Restated Articles of Incorporation dated April 19, 2011 ("Articles of Incorporation") and our Amended and Restated Bylaws dated April 30, 2019 ("Bylaws"), copies of which are incorporated herein by reference. Additionally, the Pennsylvania Business Corporation Law of 1988, as amended (the "PBCL"), also affects the terms of our capital stock.

Our authorized capital stock consists of 74,996,930 shares of Class A Common Stock and 3,070 shares of Class B Common Stock. As of the close of business on February 21, 2020, 46,189,068 shares of Class A Common Stock and 2,542 shares of Class B Common Stock were outstanding. Updates to the number of shares outstanding will be made on the cover page of our annual or quarterly reports for subsequent fiscal years or fiscal quarters that we file with the Securities and Exchange Commission.

Description of Class A Common Stock and Class B Common Stock

Voting Rights. Under our Articles of Incorporation, shares of Class B Common Stock have the exclusive right to elect directors and to vote on matters brought before meetings of shareholders, except where any applicable law shall permit shares of Class A Common Stock to vote as a class in regard to any change in the rights, preferences and privileges of our Class A Common Stock.

Right to Dividends and Other Distributions. Holders of shares of Class B Common Stock are entitled to receive dividends if, when and as they are declared by our Board of Directors out of funds legally available therefor. If and when a dividend is declared and paid on shares of Class B Common Stock, each share of Class A Common Stock is entitled to the declaration and payment of a dividend, at the same time and on the same record date, in an amount at least equal to two-thirds of one percent (2/3%) of the dividend per share paid on the Class B Common Stock.

In addition, shares of Class A Common Stock are entitled to receive dividends if, when and as they are declared by our Board of Directors out of funds legally available therefor without any requirement that a simultaneous dividend be paid on shares of Class B Common Stock.

Right to Receive Liquidation Distributions. Upon our liquidation, dissolution or winding-up, holders of Class A Common Stock and holders of Class B Common Stock are entitled to share ratably in any assets available for distribution to shareholders, provided, however, that in any such event, each holder of a share of Class B Common

Stock shall receive the amount to which he or she would be entitled as if his or her share of Class B Common Stock had been converted into 2,400 shares of Class A Common Stock.

Conversion. Each share of Class B Common Stock is convertible at any time, at the option of the holder thereof, into 2,400 shares of Class A Common Stock. We will cancel any shares of Class B Common Stock tendered for conversion and such shares shall not be reissued following conversion. Shares of Class A Common Stock are not convertible into any other shares of our capital stock.

Preemptive Rights. Holders of Class A Common Stock have the preemptive right to subscribe for and purchase pro rata any shares of Class A Common Stock offered for sale for cash, at a price per share not less than the stated value of the Class A Common Stock and upon such terms as are fixed by our Board of Directors. This preemptive right does not apply to shares of Class A Common Stock issued upon the conversion of shares of Class B Common Stock. Holders of Class B Common Stock do not have preemptive rights.

Other Matters. Holders of Class A Common Stock and Class B Common Stock have no cumulative voting rights. There are no redemption rights or sinking fund provisions applicable to the Class A Common Stock or Class B Common Stock. All outstanding shares of Class A Common Stock and Class B Common Stock are fully paid and non-assessable.

Trading Market. The Class A Common Stock is registered pursuant to Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and is listed on the NASDAQ Global Select Market under the symbol "ERIE". Broadridge Corporate Issuer Solutions, Inc. serves as our transfer agent. The Class B Common Stock is not registered under the Exchange Act and is not actively traded.

Certain Provisions Affecting Control of Our Company

General. Certain provisions of our Articles of Incorporation, Bylaws and the PBCL operate with respect to extraordinary corporate transactions, such as mergers, reorganizations, tender offers, sales or transfers of substantially all of our assets or our liquidation of the Company, and could have the effect of delaying or making more difficult a change in control of our company in certain circumstances.

Certain Provisions of the Bylaws. Our Bylaws establish advance notice procedures with respect to shareholder proposals and the nomination of candidates for election of directors. These procedures may impede shareholders' ability to bring matters before a meeting of shareholders or make nominations for directors at a meeting of shareholders.

Our Bylaws include provisions eliminating the personal liability of our directors to the fullest extent permitted by the PBCL and indemnifying our directors and officers to

the fullest extent permitted by the PBCL. The limitation of liability and indemnification provisions in our Bylaws may discourage shareholders from bringing a lawsuit against directors for breach of their fiduciary duty. These provisions may also have the effect of reducing the likelihood of derivative litigation against directors and officers, even though a derivative action, if successful, might otherwise benefit us and our shareholders.

Our Bylaws provide that any or all of the directors may be removed at any time, either with or without cause, by a vote of a majority of the shares of Class B Common Stock outstanding and entitled to vote. This provision may delay or prevent our shareholders from removing incumbent directors.

Our Bylaws may be altered, amended, changed or repealed by (i) the approval or consent of not less than a majority of the shares of Class B Common Stock then outstanding or (ii) a majority of the entire board of directors, subject to certain exceptions.

Certain Provisions of the PBCL. Under the PBCL, certain anti-takeover provisions may apply to Pennsylvania registered corporations (e.g., publicly traded companies) including those relating to (i) business combination transactions with an interested shareholder (generally defined to include a person who beneficially owns shares representing at least twenty percent of the votes that all shareholders would be entitled to cast in an election of directors of the corporation) unless certain conditions are satisfied or an exemption is applicable; (ii) control-share acquisitions in which the voting rights of certain shareholders of the corporation (specifically, a shareholder who acquires 20%, 33-1/3 or 50% or more of the voting power of the corporation) are conditioned upon the consent of a majority vote at a meeting of the independent shareholders of the corporation after disclosure by such shareholder of certain information; (iii) disgorgement of profits by certain controlling persons, generally defined as a 20% beneficial owner, from the disposition of any equity securities within twenty-four months prior to, and eighteen months succeeding, the acquisition of such control; (iv) the payment of severance to any eligible employee of a covered corporation whose employment is terminated, other than for willful misconduct, within ninety days before, or twenty-four months after, a control-share acquisition; (v) the rights of shareholders who objects to a "control transaction" (generally defined as the acquisition of voting shares by a person or group that would entitle the holders thereof to cast at least 20% of the votes that all shareholders would be entitled to cast in an election of the directors of the corporation) to demand fair value for their stock following a control transaction; (vi) a set of interrelated provisions which are designed to support the validity of actions taken by our Board of Directors in response to takeover bids, including specifically the Board's authority to "accept, reject or take no action" with respect to a takeover bid, and permitting the unfavorable disparate treatment of a takeover bidder, and (viii) provisions which allow the directors broad discretion in considering the best interests of the corporation, including a provision which permits the Board to consider various corporate interests including the short-term and long-term interests of the corporation and the resources, intent and conduct of any person seeking to acquire the corporation.

Other Factors. There are three H.O. Hirt Trusts that collectively own 2,340 shares of Class B Common Stock which represents approximately 92% of our outstanding Class B Common Stock. This concentrated ownership of the Class B Common Stock as well as certain insurance laws and regulations applicable to the acquisition of insurance holding companies can be expected to have the effect of delaying, averting or preventing a change in control of our company and would probably prevent a change in control unless a majority of the trustees then in office of each of the H.O. Hirt Trusts vote in favor of such a change in control.

**SEVENTH AMENDMENT TO
ERIE INSURANCE GROUP
RETIREMENT PLAN FOR EMPLOYEES**

(As Amended and Restated effective December 31, 2014)

WHEREAS, Erie Indemnity Company (the “Company”) maintains the Erie Insurance Group Retirement Plan for Employees (the “Plan”) under an amendment and restatement effective December 31, 2014;

WHEREAS, the Plan provides that the Company may amend the Plan; and

WHEREAS, the Company wishes to amend the Plan to change the basis for making certain actuarial computations under the Plan.

NOW, THEREFORE, effective as of December 31, 2019, the Company hereby amends the Plan as follows:

1. Section 7.8(c) of the Plan is amended and restated in its entirety to read as follows:

- (c) The actuarial equivalent present value of a retirement benefit, deferred vested pension or survivor benefit shall be calculated and paid on the basis of the “applicable mortality table”, as defined in Section 417(e)(3)(B) of the Code, and the “applicable interest rate”, as defined in Section 417(e)(3)(C) of the Code, for the fourth calendar month preceding the first day of the Plan Year in which the distribution is payable; provided, however, that actuarial equivalent present value determinations under this Section 7.8 for the period beginning December 31, 2019 and ending December 30, 2020 shall be calculated and paid on the basis of the “applicable mortality table”, as defined in Section 417(e)(3)(B) of the Code, and the “applicable interest rate”, as defined in Section 417(e)(3)(C) of the Code for the second calendar month preceding the month in which the distribution is payable if such determination results in a larger present value and, provided further, that in the event the Alternative Present Value (as hereinafter defined) of the applicable benefit is a larger amount, such larger amount shall be paid (provided such Alternative Present Value calculation does not exceed \$5,000). For purposes of this Section 7.8, the “Alternative Present Value” of a retirement benefit, deferred vested pension or survivor benefit shall be based on the Accrued Pension earned by the Participant at the earlier of his termination of employment, or December 30, 1995, determined by using the UP-1984 mortality table (reflecting a one-year setback for Participants and a two-year setback for Beneficiaries) and a 6% interest rate.

2. Section 11.6 of the Plan is amended and restated in its entirety to read as follows:

11.6 Actuarial Equivalence

- (a) For periods before December 31, 2019, any determination of actuarial equivalence required by the provisions of this Plan, when not otherwise specified in the Plan, shall be made on the basis of the mortality table referenced in IRS Revenue Ruling 2001-62, (GAR '94) with an annual interest rate of 6%.
- (b) For periods on and after December 31, 2019, any determination of actuarial equivalence required by the provisions of this Plan, when not otherwise specified in the Plan, shall be made on the basis of the "applicable mortality table" for such period, as defined in Section 417(e)(3)(B) of the Code and the "applicable interest rate", as defined in Section 417(e)(3)(C) of the Code, for the fourth calendar month preceding the first day of the Plan Year for which the determination is being made; provided, however, that with respect to any Plan benefit payable on or after December 31, 2019 to a Participant in the Plan on December 30, 2019, the application of this subsection (b) shall not result in the payment of a Plan benefit that is less favorable to the Participant than the benefit determined as of the same determination date, using the factors identified in subsection (a) above.

* * * * *

IN WITNESS WHEREOF, the Company has caused this Amendment to be executed this 23rd day of December, 2019.

ERIE INDEMNITY COMPANY

ATTEST:

/s/ Maureen Krowicki

By: /s/ Brian W. Bolash

Title: Senior Vice President

**EIGHTH AMENDMENT TO
ERIE INSURANCE GROUP
RETIREMENT PLAN FOR EMPLOYEES**

(As Amended and Restated effective December 31, 2014)

WHEREAS, Erie Indemnity Company (the “Company”) maintains the Erie Insurance Group Retirement Plan for Employees (the “Plan”) under an amendment and restatement effective December 31, 2014;

WHEREAS, the Plan provides that the Company may amend the Plan; and

WHEREAS, the Company wishes to amend the Plan to change the basis for making certain actuarial computations under the Plan.

NOW, THEREFORE, effective as of December 31, 2018, Section 2.11 of the Plan is deleted in its entirety and the following shall be inserted in lieu thereof:

2.11 “Compensation” for any period shall mean the rate of base compensation of a Covered Employee from the Employers during the period. For this purpose, “base compensation” shall mean regular base salary in the case of an employee compensated on a salaried basis, and regular base wages in the case of an employee compensated on an hourly basis, and in all cases shall exclude Form W-2 income in the form of overtime compensation, bonuses, commissions, deferred compensation plan payments, severance pay under any severance benefit plan and any other form of special or extraordinary compensation, but shall include Form W-2 income paid as a lump sum in lieu of merit increase and compensation excluded from Form W-2 income because of salary reduction agreements in connection with plans described in Section 125, 132(f)(4) or 401(k) of the Code, or resulting from deferred compensation contracts for the period in question. Compensation shall exclude any differential wage payments made on behalf of a Covered Employee who is on military leave. Effective for each Plan Year beginning on and after December 31, 1989, in no event shall the amount of Compensation taken into account under the Plan exceed the adjusted annual limitation permitted under Section 401(a)(17) of the Code for such Plan Year. Such adjusted annual limitation shall be, for each Plan Year beginning on

and after December 31, 2001, \$200,000 (as adjusted for cost-of-living increases in accordance with Section 401(a) (17)(B) of the Code). For purposes of determining benefit accruals in any given Plan Year beginning after December 31, 2001, the annual compensation limitation for any determination period after December 31, 1993 and before December 31, 2001, shall be \$200,000.

* * * * *

IN WITNESS WHEREOF, the Company has caused this Amendment to be executed this 23rd day of December, 2019.

ERIE INDEMNITY COMPANY

ATTEST:

/s/ Maureen Krowicki

By: /s/ Brian W. Bolash

Title: Senior Vice President

NINTH AMENDMENT TO
ERIE INSURANCE GROUP
RETIREMENT PLAN FOR EMPLOYEES
(As Amended and Restated Effective December 31, 2014)

WHEREAS, Erie Indemnity Company (the "Company") maintains the Erie Insurance Group Retirement Plan for Employees (the "Plan") under an amendment and restatement effective December 31, 2014;

WHEREAS, the Plan provides that the Company may amend the Plan; and

WHEREAS, the Company wishes to amend the Plan effective January 1, 2020 to make certain changes to the Plan's governance structure and administrative provisions as set forth herein.

NOW, THEREFORE, the Company hereby amends the Plan as follows:

1. Section 2.2 is hereby amended and restated in its entirety to read as follows:
 - 2.2 "Actuary" shall mean the actuary or firm of actuaries chosen with respect to settlor functions by the Company, and chosen with respect to fiduciary functions by the Administrator, but in all cases independent of the Company or Administrator, who is, or in the case of a firm one or more of whose members is, an enrolled actuary under the provisions of Section 3042 of the Employee Retirement Income Security Act of 1974.
2. Section 2.8 of the Plan is hereby amended and restated in its entirety to read as follows:
 - 2.8 "Board of Directors" or "Board" shall mean the Board of Directors of the Company. References to actions or decisions by the Board include actions or decisions by the Board's authorized designee.
3. The last sentence of the first paragraph of Section 2.35 is hereby amended and restated in its entirety to read as follows:

To the extent permitted under regulations and other guidance promulgated by the Internal Revenue Service, the Administrator may elect to determine Test Compensation on a basis other than that provided above.
4. Section 2.37 is hereby amended and restated in its entirety to read as follows:

2.37“Trust Agreement” shall mean the trust agreement entered into with a Trustee as provided in Section 9.1, together with all amendments, modifications and supplements, thereto.

5. Section 3.1 is hereby amended and restated in its entirety to read as follows:

3.1 Pension Administrator

The Plan shall be administered by a committee that shall act as Plan Administrator. The members of the administrative committee shall be appointed and removed from time to time by the Vice President, Corporate HR Officer (or, if there is no person holding that title, the person holding a successor title or acting in a similar capacity with respect to the oversight of the Company’s retirement plans), such person to be referred to herein as the “Appointing Officer.” The Company is the Plan sponsor, but it is intended that full fiduciary authority be vested in the administrative committee (and with respect to appointment and oversight of its members, the Appointing Officer), so that neither the Company nor any Affiliate is a fiduciary of the Plan, and the Plan shall be construed accordingly.

- (a) Any member of the committee who ceases to be an Employee (or, if appointment was made by job title, who ceases to hold the relevant title or a successor title) will automatically cease to be a committee member unless otherwise expressly agreed.
- (b) Any individual who is a member of the administrative committee may resign by delivering his written resignation to the Appointing Officer.
- (c) The Appointing Officer may add or remove committee members in his or her sole discretion. In making appointments, the Appointing Officer shall not be limited to any particular person or group, and nothing herein contained shall be construed to prevent any Participant, director, officer, employee or shareholder of the Employers from service as a member of the administrative committee.
- (d) Members of the administrative committee will not be compensated from the Trust Fund for services performed in such capacity, but the Company or Trust Fund will reimburse such individuals for expenses reasonably and necessarily incurred by them in such capacity, subject to compliance with such expense reimbursement policies as may be established from time to time.

- (e) The Appointing Officer shall maintain such documentation of committee membership as may be necessary or advisable, and shall provide any notice of membership changes that may be required to the Trustee and other persons.

6. Section 3.2(f) is hereby amended and restated in its entirety to read as follows:

To appoint one or more investment managers to manage the investment and reinvestment of the Fund and to enter into management contracts on behalf of the Plan with respect to such appointments. Except to the extent that power is reserved to the Administrator or other named fiduciary under the Trust Agreement, unless and until the Administrator appoints an investment manager with respect to all or a specific portion of the Fund, the Trustee shall have exclusive authority to manage and control all or such portion of the Fund.

7. Section 3.3 is hereby amended and restated in its entirety to read as follows:

3.3 Delegation of Duties

The Administrator may, from time to time, designate any person (including, without limitation, an individual, a committee or subcommittee, or a vendor) to carry out any of the responsibilities of the Administrator, subject to the limitations imposed by Section 405 of ERISA. The person so designated will have full authority or such limited authority as the Administrator may specify, to take such actions as are necessary or appropriate to carry out the responsibilities assigned by the Administrator.

8. Section 3.8 is hereby amended and restated in its entirety to read as follows:

3.8 Claims Review Procedure

The Administrator shall be responsible for the claims procedure under the Plan. The claims procedure established by the Administrator shall comply with regulations adopted by the Secretary of Labor of the United States. This procedure shall require the Administrator to provide adequate written notice to any person whose claim is denied in whole or in part, specifying the reasons for denial in a manner calculated to be understood by such person. The Administrator shall give any person whose claim has been denied a reasonable opportunity for a full and fair review by the Administrator of its decision, and shall inform the claimant of the steps he must take to obtain a review of the Administrator's decision. The Administrator shall provide the claimant with reasonable access to, and copies of, all relevant documents and other information in accordance with regulatory requirements, provided that unless otherwise required by

ERISA, the claimant's rights shall be limited by applicable attorney-client privilege, attorney work-product privilege, and other applicable privilege rules.

(i)

- (a) Determination by the Administrator Conclusive. The Administrator's determination of factual matter relating to Participants, Beneficiaries and alternate payees including, without limitation, a Participant's Credited Service, Service and any other factual matters, shall be conclusive. The Administrator and the Company and its respective officers and directors shall be entitled to rely upon all tables, valuations, certificates and reports furnished by an actuary, any accountant for the Plan, the Trustee or any investment managers and upon opinions given by any legal counsel for the Plan insofar as such reliance is consistent with ERISA. The actuary, the Trustee and other service providers may act and rely upon all information reported to them by the Administrator and/or the Company and need not inquire into the accuracy thereof nor shall be charged with any notice to the contrary. In accordance with Section 11.10, the Administrator may rely on the Employer's records, and to the extent a claimant asserts entitlement to benefits or other rights based upon facts not contained in the Plan's records, such person shall be required to provide satisfactory affirmative evidence of such facts, and the Administrator shall have the sole and exclusive discretion to determine whether the affirmative evidence is satisfactory.
- (b) Arbitration. In the event that a claimant's claim is denied by the Administrator and the claimant has exhausted all remedies (including all mandatory levels of appeal) under the Plan's claims procedures, the claimant or the Administrator will have the right to compel binding arbitration with respect to the claim. The process and procedure shall be governed by the Employer's arbitration policy, if any, and if none, by the rules of the American Arbitration Association for commercial transactions. Claims may not be litigated or arbitrated on a class action basis or on bases involving claims brought in a representative capacity on behalf of any other similarly situated party. The arbitrator will be bound by the substantive terms of the Plan and ERISA (including, but not limited to, the standard of review required by ERISA, which requires the arbitrator to defer to the Administrator and its factual findings and interpretations unless such findings and interpretations are arbitrary and capricious and requires that any assertions the claimant wishes to present to an arbitrator or court first have been presented in the claims and appeals process). All claims pertaining to the Plan shall be

required to be submitted to binding arbitration in this manner, unless such a requirement is prohibited by applicable law or regulation. Except with respect to claims as to which binding arbitration may not be compelled, no claim may be brought in any other manner.

- (c) Forum Selection. Any arbitration proceeding or civil action with respect to a claim involving the Plan must, unless otherwise agreed by the Administrator or required by law, take place in Erie, Pennsylvania (and, in the case of a civil action, in the federal district court serving Erie, Pennsylvania). Enforcement of an arbitrator's award may be sought in federal court in accordance with the Federal Arbitration Act, with any such enforcement action to be filed in the federal district court serving Erie, Pennsylvania

9. Section 3.9 is hereby amended and restated in its entirety to read as follows:

3.9 Exhaustion of Administrative Remedies

The exhaustion of the claims review procedure is mandatory for resolving every claim and dispute involving the Plan. As to such claims and disputes:

- (a) No claimant shall be permitted to commence any civil action or arbitration proceeding to recover Plan benefits or to enforce or clarify rights under the Plan under Section 502 or Section 510 of ERISA or under any other provision of law, whether or not statutory, until the claims review procedure set forth herein has been exhausted in its entirety; and
- (b) In any such civil action or arbitration proceeding all explicit and all implicit determinations by the Administrator (including, but not limited to, determinations as to whether the claim, or a request for a review of a denied claim, was timely filed) shall be afforded the maximum deference permitted by law.

10. Section 3.10 is hereby amended and restated in its entirety to read as follows:

3.10 Deadline to File Civil Action or Demand Arbitration

No civil action to recover Plan benefits or to enforce or clarify rights under the Plan under Section 502 or Section 510 of ERISA or under any other provision of law, whether or not statutory, may be brought by any claimant on any matter pertaining to the Plan unless the civil action is commenced in the proper forum before the earlier of:

- (a) Twelve months after the claimant knew or reasonably should have known of the principal facts on which the claim is based; or
- (b) Ninety days after the claimant has exhausted the claims review procedure.

11. Section 9.1(a) is hereby amended and restated in its entirety to read as follows:

- (a) The Company has established a trust with a Trustee for the purpose of receiving and holding contributions made by the Company as well as interest and other income on investments of such funds, and for the purpose of paying the pensions and other benefits provided by the Plan and paying any expenses incident to the operation of the Plan or Trust Fund as otherwise provided herein. The Trustee is to manage and operate the Trust Fund in accordance with the terms of the Trust Agreement and to receive, hold, invest and reinvest the funds of the Trust.

12. Section 9.1(b) is hereby amended and restated in its entirety to read as follows:

- (b) The Trust Agreement may be modified as provided therein. The Administrator may remove any Trustee and may select any successor trustee. Pensions under the Plan may alternatively be provided through the purchase of annuity contracts issued by an insurance company. In lieu of a Trust Agreement and Trust Fund, the Administrator may elect to have the Plan utilize a contract or contracts of insurance for the purpose of receiving and holding contributions made by the Company and for the purpose of paying pensions and other benefits provided by the Plan, and in such event the references hereunder to "Trust Agreement", "Trustee" and "Trust Fund" shall be deemed to be references to "Insurance Contract", "Insurance Carrier" and "Insured Fund" respectively. With respect to any Trust Agreement or Insurance Contract, the Company may be a party with respect to the Company's rights and obligations as settlor of the Plan's Trust Fund or Insured Fund, but is not a Plan fiduciary. In the event that any Trust Agreement or Insurance Contract grants powers to the Company (other than powers relating to the Company's corporate obligations or role as settlor of the Plan's Trust Fund or Insured Fund), the Company shall act as the Administrator's agent and shall act for and solely at the direction of the Administrator in exercising such powers.

13. The last paragraph of Section 9.1 is hereby amended and restated in its entirety to read as follows:

The Administrator may, from time-to-time, designate another person (including, without limitation, an individual, a committee or subcommittee, or a vendor) to carry out any of the Administrator's responsibilities under this Section 9.1, subject to the

limitations imposed by Section 405 of ERISA. The person so designated will have full authority, or such limited authority as the Administrator may specify, to take such actions as are necessary or appropriate to carry out the duties delegated by the Administrator.

14. Section 11.13(c)(ii) is hereby amended and restated to read as follows:

- (ii) Compensation shall be determined by the Administrator consistent with the requirements of USERRA, and shall reflect the Administrator's best estimate of the earnings the individual would have received but for the qualified military service.

15. The second-to-last paragraph of Section 12.1 is hereby amended and restated to read as follows:

Any such amendment to or termination of this Plan shall be evidenced by a written instrument adopted by the Board. Any such written instrument shall recite at which time the amendments contained therein shall become effective

16. Section 13.2(e) is hereby amended and restated to read as follows:

- (e) "Permissive Aggregation Group" means any plan of an Employer which is not part of the Required Aggregation Group, but is treated as if it were at the option of the Administrator, provided such group continues to meet the requirements of Internal Revenue Code Sections 401(a)(4) and 410.

IN WITNESS WHEREOF, the Company has caused this Plan Amendment to be executed this 23rd day of December, 2019.

ERIE INDEMNITY COMPANY

ATTEST:

/s/ Maureen Krowicki

By: /s/ Brian W.
Bolash

Title: Senior Vice President

SIXTH AMENDMENT TO
ERIE INSURANCE GROUP EMPLOYEE SAVINGS PLAN
(As Amended and Restated Effective January 1, 2015)

WHEREAS, Erie Indemnity Company (the “Company”) maintains the Erie Insurance Group Employee Savings Plan (the “Plan”) under an amendment and restatement effective as of January 1, 2015;

WHEREAS, the Plan provides that the Company may amend the Plan; and

WHEREAS, the Company desires to amend the Plan to clarify the definition of compensation used for certain purposes under the Plan.

NOW, THEREFORE, effective as of January 1, 2019, Section 1.8 of the Plan is deleted in its entirety and the following shall be inserted in lieu thereof:

- 1.8 “Compensation” for any period means the rate of base salary or the wages paid by an Employer to an Employee during the period. For this purpose, the “rate of base salary or the wages paid” shall exclude Form W-2 income in the form of overtime compensation, bonuses, commissions, deferred compensation plan payments, severance pay under any severance benefit plan and any other form of special or extraordinary compensation, but shall include Form W-2 income paid as a lump sum in lieu of merit increase and compensation excluded from Form W-2 income because of salary reduction agreements in connection with plans described in Sections 125, 132(f)(4) or 401(k) of the Code or resulting from deferred compensation contracts for the period in question. For Plan Years beginning on and after January 1, 2015, the “rate of base salary or the wages paid” shall include an amount, determined under the Company’s vacation conversion program, that is paid to the Employee as Form W-2 income and/or is excluded from Form W-2 income on account of such Employee’s salary reduction agreement applicable to such amount. Compensation shall exclude any differential wage payments made on behalf of a Covered Employee who is on military leave. Effective for each Plan Year beginning on and after December 31, 1989, in no event shall the amount of Compensation taken into account under the Plan exceed the adjusted annual limitation permitted under

Section 401(a)(17) of the Code for such Plan Year. Such adjusted annual limitation shall be, for each Plan Year beginning on and after December 31, 2001, \$200,000 (as adjusted for cost-of-living increases in accordance with Section 401(a)(17)(B) of the Code). However, for the sole purpose of computing Plan contributions that are based on an Employee's percentage of Compensation election, such adjusted annual limitation may be ignored; provided, the Employee does not receive a higher allocation of any type of contribution than the Employee could have received under the Plan had the adjusted annual limitation been considered.

* * * * *

IN WITNESS WHEREOF, the Company has caused this Amendment to be executed this 23rd day of December, 2019.

ERIE INDEMNITY COMPANY

ATTEST:

/s/ Maureen Krowicki

By: /s/ Brian W.
Bolash

Title: Senior Vice President

SEVENTH AMENDMENT TO
ERIE INSURANCE GROUP EMPLOYEE SAVINGS PLAN

(As Amended and Restated Effective January 1, 2015)

WHEREAS, Erie Indemnity Company (the "Company") maintains the Erie Insurance Group Employee Savings Plan (the "Plan") under an amendment and restatement effective as of January 1, 2015;

WHEREAS, the Plan provides that the Company may amend the Plan; and

WHEREAS, the Company wishes to make certain changes to the Plan's governance structure and administrative provisions as set forth herein.

NOW, THEREFORE, the Company hereby amends the Plan as follows, effective January 1, 2020:

1. Section 1.4 is hereby amended in its entirety to read as follows:

1.4 "Board" means the Board of Directors of the Company. References to actions or decisions by the Board include actions or decisions by the Board's authorized designee.

2. The last sentence of Section 1.36 is hereby amended in its entirety to read as follows:

To the extent permitted under regulations and other guidance promulgated by the Internal Revenue Service, the Administrator may elect to determine Test Compensation on a basis other than that provided above.

3. Section 1.38 is hereby amended in its entirety to read as follows:

1.38 "Trust Agreement" means the Trust Agreement entered into with a Trustee as provided in Section 8.1, together with all amendments, modifications and supplements thereto.

4. Section 7.5 is hereby amended in its entirety to read as follows:

7.5 Modifications to Hardship Withdrawal Standards

The Company may amend the provisions of this Article in accordance with Article 12. The Administrator may amend the policies adopted hereunder in its discretion, provided that it acts in a reasonable and non-discriminatory fashion in making such changes.

5. Section 7.6(f) is hereby amended in its entirety to read as follows:

- (f) The Company may amend the provisions of this Article in accordance with Article 12. The Administrator may amend the policies adopted hereunder in its discretion, provided that it acts in a reasonable and non-discriminatory fashion in making such changes.

6. Section 8.1 is hereby amended in its entirety to read as follows:

8.1 Trust Agreement

The Company has established a trust for the purpose of holding assets of the Trust Fund, and the trust is administered and invested pursuant to a Trust Agreement. The Trust Agreement provides, among other things, that all funds received by the Trustee thereunder shall be held, administered, invested and distributed by the Trustee, and that no part of the corpus or income of the Trust Fund held by the Trustee shall be used for, or diverted to, purposes other than for the exclusive benefit of Participants or their Beneficiaries. The Administrator may remove such Trustee or any successor Trustee, and any Trustee or any successor Trustee may resign. Upon removal or resignation of a Trustee, the Administrator shall appoint a successor Trustee.

The Administrator shall have authority to direct that there shall be more than one Trustee under the Trust Agreement (or to enter into additional Trust Agreements with respect to separate portions of the Trust Fund) and to determine the portion of the assets under the Trust Agreement to be held by each such Trustee. If such action is taken, the Administrator shall designate the additional Trustee or Trustees, and each Trustee shall hold and invest and keep records with respect to the portion of such assets held by it.

With respect to any Trust Agreement, the Company may be a party with respect to the Company's rights and obligations as settlor of the Plan's Trust Fund, but is not a Plan fiduciary. In the event that any Trust Agreement grants powers to the Company (other than powers relating to the Company's corporate obligations or role as settlor of the Plan's Trust Fund), the Company shall act as

7. Section 8.2 is hereby amended in its entirety to read as follows:

8.2 Appointment of Independent Accountants

The Administrator may select a firm of independent public accountants to examine and report on the financial position and the results of the operations of the Trust Fund created under the Plan, at such times as it deems proper and/or necessary.

8. The last paragraph of Section 8.4 is hereby amended in its entirety to read as follows:

The Administrator may, from time-to-time, designate another person (including, without limitation, an individual, a committee or subcommittee, or a vendor) to carry out any of the Administrator's responsibilities under this Section 8.4, subject to the limitations imposed by Section 405 of ERISA. The person so designated will have full authority, or such limited authority as the Administrator may specify, to take such actions as are necessary or appropriate to carry out the duties delegated by the Administrator.

9. Section 9.1 is hereby amended in its entirety to read as follows:

9.1 The Administrator

The Plan shall be administered by a committee that shall act as Plan Administrator. The members of the administrative committee shall be appointed and removed from time to time by the Vice President, Corporate HR Officer (or, if there is no person holding that title, the person holding a successor title or acting in a similar capacity with respect to the oversight of the Company's retirement plans), such person to be referred to herein as the "Appointing Officer." The Company is the Plan sponsor, but it is intended that full fiduciary authority be vested in the administrative committee (and with respect to appointment and oversight of its members, the Appointing Officer), so that neither the Company nor any Affiliate is a fiduciary of the Plan, and the Plan shall be construed accordingly.

- (a) Any member of the committee who ceases to be an Employee (or, if appointment was made by job title, who ceases to hold the relevant title

or a successor title) will automatically cease to be a committee member unless otherwise expressly agreed.

- (b) Any individual who is a member of the administrative committee may resign by delivering his written resignation to the Appointing Officer.
- (c) The Appointing Officer may add or remove committee members in his or her sole discretion. In making appointments, the Appointing Officer shall not be limited to any particular person or group, and nothing herein contained shall be construed to prevent any Participant, director, officer, employee or shareholder of the Employers from serving as a member of the administrative committee.
- (c) Members of the administrative committee will not be compensated from the Trust Fund for services performed in such capacity, but the Company or Trust Fund will reimburse such individual for expenses reasonably incurred by them in such capacity, subject to compliance with such expense reimbursement policies as may be established from time to time.
- (d) The Administrator shall be the “named fiduciary” for purposes of ERISA; provided, however, that Participants and Beneficiaries with Employer Accounts under the Plan shall be considered “named fiduciaries” solely to the extent of those fiduciary duties and responsibilities which are directly related to the exercise of voting rights with respect to Plan interests invested in the Erie Indemnity Stock Fund (and not to other aspects of Plan operation and/or administration). .
- (e) The Appointing Officer shall maintain such documentation of committee membership as may be necessary or advisable, and shall provide any notice of membership changes that may be required to the Trustee and other persons.

10. Section 9.3 is hereby amended in its entirety to read as follows:

9.3 Delegation of Duties

The Administrator may, from time to time, designate any person (including, without limitation, an individual, a committee or subcommittee, or a vendor) to carry out any of the responsibilities of the Administrator, subject to the limitations imposed by Section 405 of ERISA. The person so designated will have full authority, or such limited authority as the Administrator may specify,

11. Article 10 is hereby amended in its entirety to read as follows:

ARTICLE 10

CLAIMS PROCEDURE AND CLAIMS LITIGATION

10.1 Claims Review Procedure

The Administrator shall be responsible for the claims procedure under the Plan. The claims procedure established by the Administrator shall comply with regulations adopted by the Secretary of Labor of the United States. This procedure shall require the Administrator to provide adequate written notice to any person whose claim is denied in whole or in part, specifying the reasons for denial in a manner calculated to be understood by such person. The Administrator shall give any person whose claim has been denied a reasonable opportunity for a full and fair review by the Administrator of its decision, and shall inform the claimant of the steps he must take to obtain a review of the Administrator's decision. The Administrator shall provide the claimant with reasonable access to, and copies of, all relevant documents and other information in accordance with regulatory requirements, provided that unless otherwise required by ERISA, the claimant's rights shall be limited by applicable attorney-client privilege, attorney work-product privilege, and other applicable privilege rules.

10.2 Determination by the Administrator Conclusive

The Administrator's determination of factual matters relating to Participants, Beneficiaries and alternate payees shall be conclusive. The Administrator and the Company and its respective officers and directors shall be entitled to rely upon all tables, valuations, certificates and reports furnished by any accountant for the Plan, the Trustee or any investment managers and upon opinions given by any legal counsel for the Plan insofar as such reliance is consistent with ERISA. The Trustee and other service providers may act and rely upon all information reported to them by the Administrator and/or the Company and need not inquire into the accuracy thereof nor shall be charged with any notice to the contrary. In accordance with Section 11.10, the Administrator may rely on the Employer's records, and to the extent a claimant asserts entitlement to benefits or other rights based upon facts not contained in the Plan's records,

10.3 Exhaustion of Administrative Remedies.

The exhaustion of the claims review procedure is mandatory for resolving every claim and dispute involving the Plan. As to such claims and disputes:

- (a) No claimant shall be permitted to commence any civil action or demand arbitration to recover Plan benefits or to enforce or clarify rights under the Plan under Section 502 or Section 510 of ERISA or under any other provision of law, whether or not statutory, until the claims review procedure set forth herein has been exhausted in its entirety; and
- (b) In any such civil action or arbitration proceeding all explicit and all implicit determinations by the Administrator (including, but not limited to, determinations as to whether the claim, or a request for a review of a denied claim, was timely filed) shall be afforded the maximum deference permitted by law.

10.4 Arbitration

In the event that a claimant's claim is denied by the Administrator and the claimant has exhausted all remedies (including all mandatory levels of appeal) under the Plan's claims procedures, the claimant or the Administrator will have the right to compel binding arbitration with respect to the claim. The process and procedure shall be governed by the Employer's arbitration policy, if any, and if none, by the rules of the American Arbitration Association for commercial transactions. The arbitrator will be bound by the substantive terms of the Plan and ERISA (including, but not limited to, the standard of review required by ERISA, which requires the arbitrator to defer to the Administrator and its factual findings and interpretations unless such findings and interpretations are arbitrary and capricious and requires that any assertions the claimant wishes to present to an arbitrator or court first have been presented in the claims and appeals process). Claims may not be litigated or arbitrated on a class action basis or on bases involving claims brought in a representative capacity on behalf of any other similarly situated party. All claims pertaining to the Plan shall be required to be submitted to binding arbitration in this manner, unless such a requirement is prohibited by applicable law or regulation. Except

with respect to claims as to which binding arbitration may not be compelled, no claim may be brought in any other manner.

10.5 Forum Selection

Any arbitration proceeding or civil action with respect to a claim involving the Plan must, unless otherwise agreed by the Administrator or required by law, take place in Erie, Pennsylvania (and, in the case of a civil action, in the federal district court serving Erie, Pennsylvania). Enforcement of an arbitrator's award may be sought in federal court in accordance with the Federal Arbitration Act, with any such enforcement action to be filed in the federal district court serving Erie, Pennsylvania.

10.6 Deadline to File Civil Action or Demand Arbitration.

No civil action or arbitration proceeding, as applicable, to recover Plan benefits or to enforce or clarify rights under the Plan under Section 502 or Section 510 of ERISA or under any other provision of law, whether or not statutory, may be brought by any claimant on any matter pertaining to the Plan unless the civil action or arbitration proceeding, as applicable, is commenced in the proper forum before the earlier of:

- (a) Twelve months after the claimant knew or reasonably should have known of the principal facts on which the claim is based; or
- (b) Ninety days after the claimant has exhausted the claims review procedure.

12. Section 11.12(c)(3) is hereby amended in its entirety to read as follows:

- (3) Compensation and Test Compensation shall be determined for the individual during the period of qualified military service. The amount of Compensation and Test Compensation shall be determined by the Administrator consistent with the requirements of the USERRA, and shall reflect the Administrator's best estimate of the earnings the individual would have received but for the qualified military service.

13. Section 12.1(b) is hereby amended to read in its entirety as follows:

- (b) impermissibly divest a Participant of any portion of his Total Account hereunder that has accrued to him prior to the effective date of such amendment, or reduce or eliminate such Participant's vested status or other rights pertaining thereto in

14. The second to last paragraph of Section 12.1 is hereby amended in its entirety to read as follows:

Any such modification or amendment to this Plan shall be evidenced by a written instrument adopted by the Board. Any such written instrument shall recite at which time the amendments contained therein shall become effective.

15. Section 12.2(b) is hereby amended in its entirety to read as follows:

- (b) Notwithstanding anything to the contrary contained herein, Trustee's fees and other expenses incident to the operation and management of the Plan incurred after the termination of the Plan may, at the discretion of the Administrator, be paid from assets of the Trust Fund that are not part of any Participant's Total Account.

IN WITNESS WHEREOF, the Company has caused this Plan Amendment to be executed this 23rd day of December, 2019.

ERIE INDEMNITY COMPANY

ATTEST:

/s/ Maureen Krowicki

By: /s/ Brian W. Bolash

Title: Senior Vice President

ERIE INDEMNITY COMPANY**ANNUAL INCENTIVE PLAN***(Effective as of January 1, 2020)*

1. **Introduction.** Erie Indemnity Company (the “Company”) hereby establishes the Annual Incentive Plan (the “Plan”), effective January 1, 2020. The Board of Directors of the Company adopted the Plan on December 10, 2019.

2. **Purposes.** The purpose of the Plan is to advance the best interests of the Erie Insurance Group and thereby enhance shareholder value of the Company by providing incentives in the form of annual cash bonus awards to certain Employees upon the attainment of Performance Goals established in accordance with the Plan.

3. **Definitions.** As used in the Plan:

(a) “Award Agreement” means a written or electronic agreement entered into between the Company and a Participant or other documentation issued by the Company, in either case setting forth the terms and conditions applicable to an award granted under the Plan. An Award Agreement shall be subject to the terms of the Plan.

(b) “Board of Directors” or “Board” means the Board of Directors of the Company.

(c) “Cause” has the meaning given in the relevant Participant’s employment agreement but, in the case of a Participant who does not have an employment agreement, the Committee shall interpret the term “Cause” for the purposes of the Plan.

(d) “Code” means the Internal Revenue Code of 1986, as amended. A reference to a particular section of the Code shall also refer to that section as it may be amended or to its successor.

(e) “Committee” means the Executive Compensation and Development Committee of the Board of Directors or another committee appointed by the Board, which shall be composed of not less than two members of the Board, each of whom at the time of appointment to the Committee and at all times during service as a member of the Committee shall meet the requirements of (i) a “non-employee director” as then defined under Rule 16b-3 under the Exchange Act, (ii) the Pennsylvania Insurance Holding Companies Act, and (iii) an “independent director” under the rules and regulations of the principal securities exchange on which the Shares are listed. If at any time there is no committee authorized or properly constituted to administer the Plan, the Board shall exercise the powers of the Committee. Furthermore, the Board may, in its discretion, assume any or all of the powers of the Committee. Where appropriate, the term “Committee” shall include any delegate of the Committee pursuant to Section 4(b).

(f) “Company” means Erie Indemnity Company.

(g) “Company Performance Goal” means a test of performance based on one or more of the following criteria and expressed in either, or a combination of, absolute or relative values or rates of change: (i) applications for insurance policies, (ii) policies-in-force, (iii) retention ratio, (iv) direct written premiums, (v) the operating ratio of the property and casualty insurance operations of the Erie Insurance Group, (vi) the reported or adjusted statutory or GAAP combined ratio, loss ratio, expense ratio or dividend ratio of the property and casualty insurance operations of the Erie Insurance Group, (vii) net income (including net income before or after taxes), net income per share and net income per share growth rate, (viii) net operating income (net income excluding realized gains and losses net of taxes), net operating income per share and net operating income per share growth rate, (ix) operating revenue, net premiums written or net premiums earned, (x) operating expenses, cost of management operations or underwriting expenses, (xi) cash flow, (xii) return on capital, surplus, shareholders’ equity, assets or investments, (xiii) economic value added (the excess of net operating profit after taxes over the weighted average cost of capital, relative to average capital employed), (xiv) stock price, (xv) market share, (xvi) gross margins, (xvii) statutory Risk Based Capital score, (xviii) ratings of financial strength, issuer credit, debt, or other similar indicators of financial soundness issued by independent rating agencies or firms, such as A.M. Best Company, Standard & Poor’s, Moody’s, and Fitch Ratings, (xix) rankings or awards from independent survey and rating firms, such as J.D. Powers, for customer, insured, agent and employee satisfaction, (xx) delivery of objective information technology projects, (xxi) return on revenue, (xxii) same store sales, and (xxiii) such other criteria determined by the Committee in its sole discretion. Performance measures may be based on the performance of the Company, the Erie Insurance Group, any member of the Erie Insurance Group, a division, department, business unit or other portion of such an entity, a product line or products, or any combination of the foregoing and/or upon a comparison of such performance with the performance of a peer group of corporations or other measure selected or defined by the Committee at the time of making an award. The Committee may specify that the measurement of performance shall include or exclude particular items, such as losses from discontinued operations; debt prepayment penalties; extraordinary gains or losses; the cumulative effect of accounting changes or the effect of material changes in tax laws; acquisitions or divestitures; unusual or nonrecurring items; asset write downs; litigation, claims, judgments, or settlements not related to core operations; expenses for reorganization or restructuring initiatives; currency fluctuations; reserve strengthening or financing activities; and realized investment gains or losses.

(h) “Company Incentive Award” has the meaning given in Section 7(c)

(i) “Company Incentive Target” has the meaning given in Section 7(b).

(j) “Early Retirement” means cessation of employment upon or after attainment of age 55 and completion of 15 years of Credited Service (as defined under the Erie Insurance Group Retirement Plan for Employees).

(k) “Employee” means an employee of the Company or of another member of the Erie Insurance Group.

(l) “Erie Insurance Group” means the Company and its subsidiaries and affiliates, including, but not by way of limitation, Erie Insurance Exchange, Erie Insurance Company,

Erie Insurance Company of New York, Erie Insurance Property & Casualty Company, Flagship City Insurance Company, Erie Family Life Insurance Company and Erie Resource Management Corp., and their respective subsidiaries and affiliates.

(m) “Exchange Act” means the Securities Exchange Act of 1934, as amended. A reference to a particular section of the Exchange Act shall also refer to that section as it may be amended or to its successor.

(n) “Individual Incentive Award” has the meaning given in

Section 8(c).

(o) “Individual Incentive Target” has the meaning given in Section 8(b).

(p) “Individual Performance Goal” has the meaning given in Section 8(a).

(q) “Normal Retirement” means cessation of employment upon or after attainment of age 65.

(r) “Participant” means an Employee who holds an outstanding award under the Plan.

(s) “Performance Goal” means a Company Performance Goal or an Individual Performance Goal.

(t) “Performance Period” means the calendar year.

(u) “Permanent Disability” means a medically determinable physical or mental impairment that may be expected to result in death or to last at least a year and that renders an Employee incapable of performing the Employee’s duties with the Erie Insurance Group. A determination of disability shall be made by the Committee in a uniform, nondiscriminatory manner on the basis of medical evidence. Notwithstanding the foregoing, in the case of a determination that would accelerate payment of an award or amount that is deferred compensation subject to Section 409A, a Participant shall be considered to have a “Permanent Disability” only if the Participant is “disabled” within the meaning of Section 409A.

(v) “Section 409A” means Code section 409A, together with the treasury regulations promulgated and other official guidance issued thereunder.

4. Administration.

(a) Authority. The Committee shall administer the Plan. The Committee shall have all the powers and authority vested in it by the terms of the Plan. The Committee shall have full power and authority to interpret the Plan and Award Agreements, to prescribe, amend, and rescind rules and regulations relating to the Plan, and to make any determinations it finds necessary or advisable for the administration of the Plan. The Committee may correct any defect or supply

any omission or reconcile any inconsistency in the Plan or in any Award Agreement in the manner and to the extent the Committee in its discretion deems desirable. The Committee shall have complete discretion in the exercise of its powers and authority under the Plan, and the Committee's interpretations, determinations, and decisions in the administration of the Plan shall be final and conclusive.

(b) Delegation. The Committee may act only by a majority of its members in office, except that:

(i) The Committee may authorize any one or more of its members or any officer of the Company to execute and deliver documents on behalf of the Committee.

(ii) The Committee may delegate to the Chief Executive Officer of the Company or his or her delegate ministerial duties and authority to interpret the Plan and respond to claims, provided that the Committee may not delegate authority with respect to nonministerial actions affecting Participants subject to the reporting requirements of the Exchange Act.

(iii) The Committee may delegate to the Chief Executive Officer or his or her delegate some or all of the Committee's discretion and authority with respect to the granting of awards and establishing the terms of awards, including with respect to the granting of awards to specified categories of Employees, subject to the same limits as described in paragraph (ii) above, and subject to any other limits the Committee may provide. By way of example, the Committee may delegate to the Chief Executive Officer discretion and authority to determine whether and when and under what terms the Company shall grant awards to Employees who are hired or promoted during a Performance Period (other than Employees subject to the reporting requirements of the Exchange Act), or the Committee may delegate authority to grant awards with specified Company Incentive Targets and Company Performance Goals to Employees who are hired or promoted to specified positions during a Performance Period.

5. Eligibility.

(a) In General. Any Employee who the Committee, in its sole discretion, determines has or has the potential of having a significant effect on the operations or results of the Company or the Erie Insurance Group shall be eligible to participate in the Plan for a Performance Period, provided that no Employee shall be entitled to an award except as determined by the Committee.

(b) New or Promoted Employee. An Employee hired during a Performance Period and an Employee promoted during a Performance Period who was not eligible to participate in the Plan at the beginning of the Performance Period may, as determined by the Committee in its sole discretion, become a Participant during a Performance Period and participate in the Plan for such Performance Period on a pro-rata basis based on the number of days in the Performance Period on which the Employee is a Participant in the Plan.

(c) Effect on Other Bonus Plan Participation. Participants in the Plan for a Performance Period shall be ineligible to participate in any other annual incentive or bonus plan

sponsored by any member of the Erie Insurance Group for the portion of the Performance Period (measured in days) during which they participate in the Plan. An Employee who becomes a Participant after the first day of a Performance Period shall be entitled to a pro rata portion of the benefit, if any, to which he or she otherwise would be entitled under any other bonus plan for the Performance Period based on the number of days in the Performance Period before the date he or she became a Participant in the Plan.

(d) No Right to Continued Participation. The grant of an award to a Participant for a Performance Period shall not entitle the Participant to an award for a later Performance Period.

6. Awards.

(a) Types of Awards. Awards under the Plan may be in the form of Company Incentive Awards and Individual Incentive Awards.

(b) Grant of Awards, Terms of Awards, and Award Agreements. For each Performance Period, the Committee shall select the Employees to participate in the Plan, determine the amounts available under each award, and establish all other terms of each award. The Committee shall set forth the terms of each award in an Award Agreement. An Award Agreement shall specify Performance Goals, incentive targets, and the method for calculating incentive awards and may contain any provision approved by the Committee, subject to the terms of the Plan. An Award Agreement may make provision for any matter that is within the discretion of the Committee or may reserve for the Committee discretion to approve or authorize any action with respect to the award. To the extent an Award Agreement conflicts with the terms of the Plan, the terms of the Plan shall supersede the terms of the Award Agreement.

(c) Nonuniform Determinations. The Committee's determinations under the Plan or Award Agreements, including, without limitation, the selection of Participants to receive awards, the targets, goals, amounts, and timing of awards, and the terms of specific Award Agreements, need not be uniform, regardless of whether Participants are similarly situated.

(d) Promotion of Participant. Upon the promotion of an Employee who is already participating in the Plan for a Performance Period, the Committee may, in its sole discretion, determine to grant such Employee an additional award to reflect the promotion.

(e) Provisions Governing All Awards. All awards shall be subject to the following provisions:

(i) Transferability. An award shall not be transferable other than by will or the laws of descent and distribution. During the lifetime of a Participant, any action to be taken with respect to an award shall be taken only by the Participant or, in the event the Participant becomes legally incompetent, by the Participant's guardian or legal representative.

(ii) No Employment Rights. Neither the adoption of the Plan nor the grant of an award shall confer on a Participant the right to continue employment with the Employer, nor shall it interfere with the right of the Employer to terminate a Participant's employment at any time for any reason, with or without cause.

(f) Recoupment of Awards. An Award Agreement shall contain such provisions as the Committee or Board shall determine to be appropriate requiring the Participant to comply with the Company's policies or programs regarding the recoupment of bonuses or share purchase and retention requirements, or both, as such policies and programs may be modified or changed by the Board from time to time.

7. Company Incentive Targets and Awards and Company Performance Goals.

(a) Establishment of Company Performance Goals. The Committee shall establish specific written Company Performance Goals for each Employee to be awarded a Company Incentive Target for a Performance Period.

(b) Company Incentive Target. The Committee shall assign to each Participant a Company Incentive Target. The Company Incentive Target shall be expressed as a percentage of the Participant's annual rate of base salary in effect on December 31 of the Performance Period for which the Company Incentive Target is being assigned and shall be the basis for calculating the amount of cash compensation payable to the Participant upon the attainment, in whole or in part, or the surpassing of, the Company Performance Goals for the Performance Period.

(c) Company Incentive Award. A Company Incentive Award is the actual cash amount, if any, earned by a Participant during a Performance Period for the attainment, in whole or in part, or the surpassing, of the Company Performance Goals for such Performance Period.

(d) Method of Calculating Company Incentive Awards. When the Company Performance Goals are established for a Participant, the Committee shall also specify, in terms of a formula or standard, the method for calculating the amount of the Participant's Company Incentive Award if the Company Performance Goal is attained, in whole or in part, or surpassed. If more than one Company Performance Goal is established for a Performance Period, the Committee shall also specify the weighting assigned to the Company Performance Goals. The Committee may, at the time Company Performance Goals are established, determine that unusual items or certain specified events or occurrences, including changes in accounting standards or tax laws and the effects of non-operational or extraordinary items as defined by generally accepted accounting principles, shall be excluded from the calculation.

(e) Determination of Company Incentive Award. After the end of the Performance Period, the Committee shall determine the amount of a Participant's Company

Incentive Award for the Performance Period, if any, based on the level of attainment of the applicable Company Performance Goals for the Performance Period in accordance with the terms of the award as set forth in the Award Agreement. A Company Incentive Award shall not be payable unless the Committee shall determine in writing the extent to which the Company Performance Goals and other material terms of the Plan and the applicable Award Agreement were achieved.

8. Individual Incentive Targets and Awards, and Individual Performance Goals.

(a) Establishment of Individual Performance Goals. For each Employee to be awarded an Individual Incentive Target for a Performance Period, the Committee shall review and approve the Employee's Individual Performance Goals as established pursuant to the employee performance assessment program in effect from time to time and set forth on the Employee's individual performance assessment form for the Performance Period.

(b) Individual Incentive Target. The Committee may in its discretion assign an Individual Incentive Target to a Participant for a Performance Period. The Individual Incentive Target shall be expressed as a percentage of the Participant's annual rate of base salary in effect on December 31 of the Performance Period for which the Individual Incentive Target is being assigned and shall be the basis for calculating the amount of cash compensation payable to the Participant upon attaining, in whole or in part, or surpassing, the Participant's Individual Performance Goals for the Performance Period.

(c) Individual Incentive Award. With respect to a Participant who has been awarded an Individual Incentive Target for a Performance Period, an Individual Incentive Award is the actual cash amount, if any, earned by the Participant during the Performance Period for attaining, in whole or in part, or surpassing the Participant's Individual Performance Goals for the Performance Period.

(d) Method for Calculating Individual Incentive Award. When the Individual Performance Goals are established for a Participant, the Committee shall also specify the method for calculating the amount of the Individual Incentive Award if the Individual Performance Goals are attained, in whole or in part, or surpassed by the Participant. If more than one Individual Performance Goal is established for a Performance Period, the Committee shall also specify the weighting assigned to the Individual Performance Goals. The Committee may determine that unusual circumstances or certain specified events or occurrences shall be excluded from the calculation.

(e) Determination of Individual Incentive Award. After the end of the Performance Period, the Committee shall determine the amount of a Participant's Individual Incentive Award for the Performance Period, if any, based on the level of attainment of the applicable Individual Performance Goals for the Performance Period in accordance with the terms of the award as set forth in the Award Agreement. An Individual Incentive Award shall not be payable unless the Committee shall determine in writing the extent to which the Company Performance Goals and other material terms of the Plan and the applicable Award Agreement were achieved. The Committee shall have the discretion to adjust the amount that would otherwise be earned upon achievement of Performance Goals, or modify Performance Goals associated with a Performance Period.

9. Vesting in Award for a Performance Period.

(a) Vesting if Employed at End of Performance Period. A Participant's interest in an award shall become vested on the last day of the Performance Period for the award, provided that the Participant remains an Employee through that date.

(b) Forfeiture. A Participant shall forfeit all interest in an award for a Performance Period upon termination of employment with the Erie Insurance Group before the last day of that Performance Period, except as provided in Section 9(c) or (d) below.

(c) Retirement, Death, or Disability. If a Participant's termination of employment occurs before the last day of the Performance Period by reason of Normal or Early Retirement, Death, or Permanent Disability, the Participant's interest in a portion of the award for that Performance Period shall be vested. The Committee in its discretion shall determine the portion to be vested, provided that it shall not be less than a pro rata portion based on the number of days the Participant was an Employee during the Performance Period.

(d) Other Termination. If a Participant's termination of employment occurs before the last day of the Performance Period by reason other than Normal or Early Retirement, Death, or Permanent Disability, the Committee may, in its discretion, determine that the Participant's interest in all or a portion of the award for that Performance Period shall be vested.

(e) Termination for Cause. A Participant shall forfeit all interest in an award for a Performance Period upon the termination of his or her employment for Cause, regardless of whether the termination occurs before or after the last day of the Performance Period, notwithstanding any other provision of this Section 9.

10. Payment of Vested Awards.

(a) Timing of Payment. Unless deferred pursuant to Section 10(b), a Participant's vested interest in a Company Incentive Award and an Individual Incentive Award for a Performance Period shall be paid in cash to the Participant in the first calendar year beginning after the end of that Performance Period, as promptly as reasonably practicable following the Committee's determination and certification of the awards.

(b) Deferral. A Participant may elect to defer all or a portion (in whole percentages) of his or her vested interest in a Company Incentive Award or an Individual Incentive Award, in accordance with the terms of a deferral agreement entered into between the Participant and the Company pursuant to the Deferred Compensation Plan of Erie Indemnity Company, as it may be amended from time to time (the "Deferred Compensation Plan") or the Erie Indemnity Company Incentive Compensation Deferral Plan, as it may be amended from time to time (the "Deferral Plan"), to the extent the Participant is eligible to participate in the Deferred Compensation Plan or the Deferral Plan, as applicable. An election to defer must be made before the beginning of the Performance Period to which the award relates, except as otherwise allowed under the Deferred Compensation Plan or the Deferral Plan for a new employee or newly promoted employee. No amount in excess of the amount of the Company or Individual Incentive Award deferred shall be

payable to the Participant for such deferral, except as may be based upon either an actual or deemed reasonable rate of interest or on one or more actual or deemed investment vehicles as made available from time to time by the Company pursuant to the Deferred Compensation Plan or Deferral Plan.

11. Term of Plan. The Plan shall take effect as of January 1, 2020. Unless terminated earlier by the Board of Directors, the Plan will remain in effect from year to year until formally amended or terminated in writing by the Board of Directors.

12. Amendment of Awards. Subject to Section 17(b), the Committee may at any time unilaterally amend any outstanding award to the extent the Committee determines necessary or desirable, provided, however, that an amendment that would be adverse to the interests of the Participant shall not be effective without the Participant's consent.

13. Amendment and Termination of Plan. Subject to Section 17(b), the Board shall have the right to amend or terminate the Plan at any time, provided that any termination shall automatically end the outstanding Performance Period and calculations shall be made with respect to achievement of the Company and Individual Performance Goals for such Performance Period for the purpose of determining whether any partial Company or Individual Incentive Awards may be payable under the Plan.

14. Miscellaneous.

(a) **Unsecured Creditor.** The Plan constitutes a mere promise by the Company to make benefit payments in the future. The Company's obligations under the Plan shall be unfunded and unsecured promises to pay. The Company shall not be obligated under any circumstance to fund its financial obligations under the Plan. It may, in its discretion, set aside funds in a trust or other vehicle, subject to the claims of its creditors, in order to assist it in meeting its obligations under the Plan, if such arrangement will not cause the Plan to be considered a funded deferred compensation plan. To the extent that a Participant or beneficiary or other person acquires a right to receive payments under the Plan, the right shall be no greater than the right of a general unsecured creditor of the Company, and the Participant and beneficiary shall have the status of a general unsecured creditor of the Company.

(b) **Beneficiary Designation.** A Participant may, from time to time, name a beneficiary or beneficiaries (who may be named contingently or successively) to whom a benefit under the Plan is to be paid in case of the Participant's death before the Participant receives all of such benefit. A designation shall automatically revoke all prior designations by the same Participant with respect to such benefit and shall be effective only when filed by the Participant in writing with the Committee or its delegate during the Participant's lifetime. In the absence of such a designation, any benefits remaining payable under the Plan at the Participant's death shall be paid when due to the Participant's estate or the person to whom the Participant's rights are transferred by will or under the laws of descent and distribution, as the case may be.

(c) **Satisfaction of Tax Liabilities.** Company Incentive Awards and Individual Incentive Awards shall be subject to federal income and FICA tax withholding and to other federal, state, and local tax withholding as the Company determines required by applicable law.

(d) No Alienation. Except to the extent required by law, the right of a Participant or beneficiary to payment under the Plan shall not be subject to anticipation, alienation, sale, transfer, assignment, pledge, encumbrance, attachment, or garnishment by creditors of the Participant or his or her beneficiary.

(e) No Right to Awards. No Participant or Employee shall have any claim to be granted any award under the Plan, and there is no obligation for uniformity of treatment of Participants and Employees.

(f) Limits of Liability. Any liability of the Company to a Participant with respect to an award shall be based solely upon contractual obligations created by the Plan and the Award Agreement. Neither the Company, nor any member of its Board or of the Committee, nor any delegate of the Committee, nor any other person participating in the determination of a question under the Plan, or in the interpretation, administration, or application of the Plan, shall have any liability to any party for any action taken or not taken in good faith under the Plan.

(g) Indemnification. Each person who is or has been a member of the Committee or of the Board or who is a delegate of the Committee or Board under the Plan shall be indemnified and held harmless by the Company against and from any loss, cost, liability, or expense that may be imposed upon or reasonably incurred by such person in connection with or resulting from any claim, action, suit, or proceeding to which such person may be a party or in which such person may be involved by reason of any action taken or failure to act under the Plan and against and from any and all amounts paid by such person in a settlement approved by the Company, or paid by such person in satisfaction of any judgment in any such action, suit, or proceeding against such person, provided such person shall give the Company an opportunity, at its own expense, to handle and defend the same before such person undertakes to handle and defend it. The foregoing right of indemnification shall not be exclusive of any other rights of indemnification to which such persons may be entitled under the Company's Articles of Incorporation or Bylaws, as a matter of law, or otherwise, or any power that the Company may have to indemnify them or hold them harmless.

15. Severability. If a provision of the Plan or an award is, becomes, or is deemed invalid, illegal, or unenforceable in any jurisdiction, or would disqualify the Plan or an award under any law determined by the Committee to be applicable, the provision shall be construed or deemed amended to conform to applicable law or, if it cannot be construed or deemed amended without, in the determination of the Committee, materially altering the intent of the Plan or award, it shall be deemed deleted and the remainder of the Plan or award shall remain in full force and effect; provided, however, that, unless otherwise determined by the Committee, the provision shall not be construed or deemed amended or deleted with respect to a Participant whose rights and obligations under the Plan are not subject to the law of such jurisdiction or the law determined by the Committee to be applicable.

16. Governing Law; Construction. The Plan shall be construed in accordance with the law of the Commonwealth of Pennsylvania, without regard to its conflicts of law principles. Titles of sections of the Plan are for convenience of reference only and are not to be taken into account when construing and interpreting the provisions of the Plan.

17. Section 409A.

(a) Awards granted under the Plan are intended to comply with Section 409A, and the Plan and Award Agreements shall be administered, construed and interpreted in accordance with such intent. Awards shall be granted, paid, settled or deferred in a manner that will comply with Section 409A.

(b) Notwithstanding any contrary provision of Section 12 or 13, an action by the Board or Committee shall not accelerate or defer a payment of an award unless otherwise permissible under Section 409A. Unless the Committee determines otherwise, any provision of the Plan that would cause the grant of an award or the payment, settlement or deferral thereof to fail compliance with Section 409A may be amended to comply with Section 409A, which may be made on a retroactive basis, in accordance with Section 409A.

* * * * *

IN WITNESS WHEREOF, the Board of Directors of the Company has caused this document to be executed this 10th day of December, 2019.

ERIE INDEMNITY COMPANY

By: /s/ Brian W. Bolash

Brian W. Bolash

Senior Vice President, Secretary

and

General Counsel

Exhibit 23

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements:

- (1) Registration Statement (Form S-8 No. 333-218739) pertaining to the Erie Indemnity Company Incentive Compensation Deferral Plan,
- (2) Registration Statement (Form S-8 No. 333-188244) pertaining to the Erie Indemnity Company Equity Compensation Plan,
- (3) Registration Statement (Form S-8 No. 333-148705) pertaining to the Erie Indemnity Company 2004 Long-Term Incentive Plan, Erie Indemnity Company 1997 Long-Term Incentive Plan, and Erie Indemnity Company Deferred Compensation Plan for Outside Directors,
- (4) Registration Statement (Form S-8 No. 333-82062) pertaining to the Erie Indemnity Company Long-Term Incentive Plan, and
- (5) Registration Statement (Form S-8 No. 333-53318) pertaining to the Erie Indemnity Company Long-Term Incentive Plan

of our reports dated February 27, 2020, with respect to the financial statements of Erie Indemnity Company and the effectiveness of internal control over financial reporting of Erie Indemnity Company included in this Annual Report (Form 10-K) of Erie Indemnity Company for the year ended December 31, 2019.

/s/ Ernst & Young LLP

Cleveland, OH
February 27, 2020

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002

I, Timothy G. NeCastro, certify that:

1. I have reviewed this annual report on Form 10-K of Erie Indemnity Company;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's fourth fiscal quarter that has materially affected or is reasonably likely to materially affect the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors:
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date:

February 27, 2020

/s/ Timothy G. NeCastro

Timothy G. NeCastro

President & CEO

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002

I, Gregory J. Gutting, certify that:

1. I have reviewed this annual report on Form 10-K of Erie Indemnity Company;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's fourth fiscal quarter that has materially affected or is reasonably likely to materially affect the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors:
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date:

February 27, 2020

/s/ Gregory J. Gutting

Gregory J. Gutting

Executive Vice President & CFO

Exhibit 32

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

We, Timothy G. NeCastro, Chief Executive Officer of the Erie Indemnity Company (the "Company"), and Gregory J. Gutting, Chief Financial Officer of the Company, certify, pursuant to § 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. § 1350, that:

- (1) The Annual Report on Form 10-K of the Company for the annual period ended December 31, 2019 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m); and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Timothy G. NeCastro

Timothy G. NeCastro
President & CEO

/s/ Gregory J. Gutting

Gregory J. Gutting
Executive Vice President & CFO

February 27, 2020

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.